The National Future Farmer

Owned and Published by the Future Farmers of America

December-January
1962-63

Why is New Holland America's fastest-growing spreader line?

Ever have to empty a spreader by hand because of a breakdown? Then you know why America's farmers—*in record numbers*—are turning to New Holland.

About 4 out of 5 spreader breakdowns are due to chain breakage. So New Holland offers you an apron chain that withstands *more than twice* the pull of ordinary chains . . . it's standard on 175-bushel spreader and optional on 130-bushel unit.

In addition, there are automotive slip clutches, shear bolts or shear keys on all PTO units—still further protection against down time!

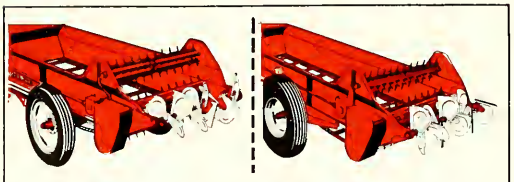
You'll like the way New Holland puts steel where steel should be . . . wood where wood should be. The flared-out sides are made of high-strength steel, with special Meta-Life treatment against corrosion. The flooring is wood, deeply penetrated with Penta-Cote preservative.

And—you get the toughest paddles in the business! Heavy-gauge, specially hardened by heat treatment. Practically eliminates bent and broken widespread paddles.

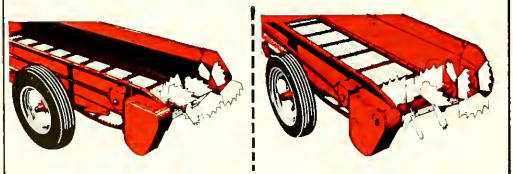
See these brawny, modern spreaders at your New Holland dealer's. Capacities from 110 to 175 bushels. Choice of triple-beater or single-beater models. One is exactly right for *your* farm!

If you can't afford a breakdown, you need a New Holland spreader!

New Holland Machine Company Division of Sperry Rand Corporation, New Holland, Pennsylvania.



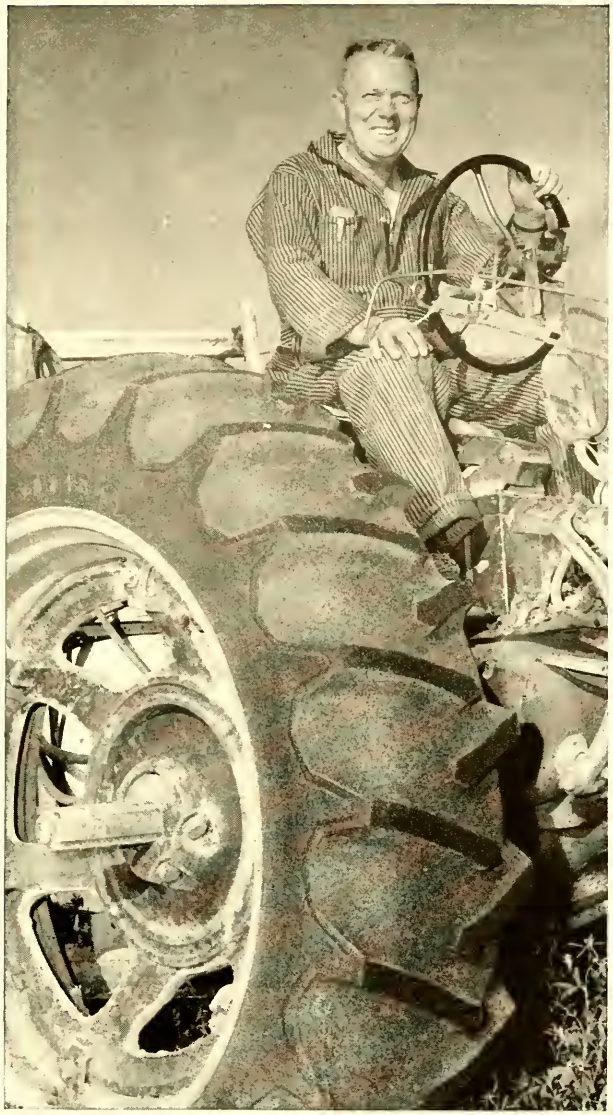
Fastest-selling big spreader in the U.S. is New Holland's "331" (left). 130-bushel capacity, tractor-drive. Five spreading rates plus clean-out position—all controlled from tractor seat! Lays down a fine, uniform pattern 12 feet wide. Another big seller: the 175-bushel "475" (right).



New Model 470 (left) has the same big capacity as the "475". Both the "470" and the 130-bu. "325" (right) provide same sawtooth paddles that rip through hard frozen manure. Self-cleaning beater design reduces twine and manure tangles.

NH NEW HOLLAND

"First in Grassland Farming"



Earl Hunter, Ririe, Idaho

Farmers you look to as leaders report on Firestone Field & Road tires

Stretching about as far as the eye can see, 1,500 acres of rich Idaho farmland in the Snake River Valley keep Earl Hunter on the move. He's an innovator. And new ideas in farming have a way of getting into practice on his land.

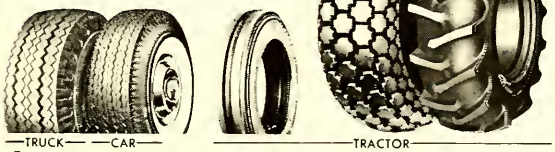
Right now Mr. Hunter has 20 tractors and 14 trucks running on Firestone tires. Like all busy farmers, he knows the value of keeping his equipment on the job.

That's why he uses Firestone Field & Road tires on his tractors. "Our tractors are on the road a lot during peak season," says Mr. Hunter. "These Field & Road tires really stand up—there's no cupping or uneven wear like other tires. Their traction is outstanding, the best we've ever used. And working on wet ground they seem to clean themselves.

"One of the good things about buying Firestone tires is the dealer's on-the-farm service. If you need a tire it's on the job in minutes."

Why don't you talk to your nearby Firestone Dealer. He will be happy to come out and answer your farm tire needs.

SAVE AND BE SURE
with Firestone tires on all wheels!



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OUR COVER (Photo by Bob E. Taylor)—"Oops!" This midwinter skating party at Vo-ag Instructor G. H. Griffith's Ohio farm pond has its ups and downs. Future Farmers are members of the Westerville Chapter.

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Sunrise or sunset?

It doesn't make much difference, really, whether the sun is just rising up over the ridge, or sinking behind it. For at the Danforth Farm Youth Center (located at the Purina Research Farm near Gray Summit, Missouri), beef calves, dairy heifers, lambs, and pigs keep "working" around the clock to help young folks.

They keep munching away at new experimental Purina Chows. "These experimental Chows are so secret that I don't even know what I'm feeding," says Gene Harfst, in charge of one barn. "But that's good—this way I don't favor any certain ration or any certain animal.

"We weigh all animals regularly, and we have them judged to see how they place in the show ring. Then all results are evaluated by our research staff, and they select the ration that makes the animals win on show standards at the most economical cost," Gene says.

Who ever finds out which rations are best? The young men and women all over the world do. That's one reason why 3,614 young folks visited the Danforth Farm Youth Center last year. It's dedicated to them.

PURINA

Ralston Purina Company, Checkerboard Square, St. Louis 2, Mo.

FOR all Official

FFA

MERCHANDISE

SEE YOUR
CHAPTER CATALOGUE

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YOUR GROUP CAN RAISE $100 TO $2500 IN 4 TO 15 DAYS WITHOUT RISK OR INVESTMENT THROUGH MASON'S PROTECTED FUND RAISING PLAN

Thousands of groups throughout the country have successfully conducted famous MASON PROTECTED FUND-RAISING DRIVES, raising money quickly and *completely without risk or investment*. We supply a choice of top-quality MASON candies, beautifully boxed. At no charge to you, each package has an attractive, printed band, bearing your organization's name, picture and slogan. We even PREPAY shipping charges! You make a big NET PROFIT of 66⅔% (40¢ on every box that costs you 60¢) and you pay NOTHING until AFTER your drive is over. *Anything remaining unsold may be returned for full credit.* For complete information without obligation, write us or fill in the coupon below.

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Mason, Box 500, Mineola, N. Y.
Gentlemen: *Please send me, without obligation, information on your Fund Raising Plan.*
Age
Name _____ (If under 21) ____
Organization _____
Street Address _____
City _____ State _____
How many members _____ Phone _____

Mason Candies, Inc., Mineola, L. I., N. Y.

Your Editors Say . . .

Future Farmers have a reputation for being "honest and fair in the game of life." An incident at the recent National Convention offers another testimony to this characteristic of FFA members. We thought it should be shared with our readers.

A billfold was found and turned in to the desk of Paul Gray, national executive secretary, with contents intact. After an announcement, it was identified by the owner, who was pleased to get it back. He wrote Mr. Gray the following letter:

Dear Mr. Gray:

While I was in Kansas City at the National FFA Convention, my billfold containing $23 was lost. As I had lost it in a crowd in Convention Hall, I was certain it would never be returned. However, it was, and I am very grateful to the person or persons who brought it back.

I want you to know that I am very happy to be a member of such a fine organization as the FFA and to associate with young men who are fair and honest.

Sincerely yours,

Burton Stogdill,
Ellsworth, Wisconsin

It is a real challenge for all members to uphold this tradition. Certainly this is a rich heritage to pass on to the younger fellows who will follow you into FFA membership.

An FFA film has received an "Award of Excellence" from the USDA. It is the 1961 Four-Star Farmer Film, which has been seen by many chapters throughout the country. The award was given to a select group of eight, chosen from 101 agricultural films shown by USDA during a Film Festival. This event was held as a part of USDA's centennial year observance. Dr. A. W. Tenney, national FFA advisor, accepted the award November 7 on behalf of the Vernard Organization, who produced the film, and the Keystone Steel and Wire Company, the film's sponsor.

Among those receiving the Honorary American Farmer Degree at the National Convention was V. Stanley Allen, business manager of *The National FUTURE FARMER*. Stan has been serving Future Farmers since the Magazine was started and is the oldest member of the staff in points of service. He came with the Magazine as circulation manager in 1952 and was later promoted to business manager but retained his responsibilities in circulation. Many of our readers will recognize his byline on "Sportrait," a well-liked feature in each issue.

Stan Allen, left, receives honorary degree from President Victor Butler.

The November elections held some interest for Future Farmers. Don Fuqua, president of the Florida Association in the early 1950's, was elected to the U. S. Congress from the state of Florida. In Maine, Governor John H. Reed, a former Future Farmer, was elected for another term. Perhaps you know of others. If so, we would appreciate your writing to tell us about them.

Wilson Carnes, **Editor**

Texaco Marfak could have kept it going...

because Marfak seals out dirt—prevents bearing breakdowns

You know a breakdown like this can be a time-waster. So, before it happens to *you*—check your lubricant. A *lazy* lubricant may let dust and dirt get through to open bearings. This causes abrasive action that damages costly farm machinery. Make a change to Texaco Marfak, the superior grease that sticks to bearings better and longer. In fair weather and foul, tough Texaco Marfak won't pound out, won't leak out or dry out. Marfak forms a tough collar around bearings to seal out dirt. Keeps your equipment on the job longer. So be sure the lubricant you use is Marfak. Get it from your Texaco man. On the farm or on the highway . . . **TRUST THE MAN WHO WEARS THE STAR.**

TEXACO

Conrath, Wisconsin

My hat is off to the editor who gave the final treatment to "Not I, We Did It!" I learned much and cried not at all for the unborn words. For the first time an altering did not upset the style of my writing. In fact, it helped speed up the rolling rhythm and I thank you for it. The change in the lead to ham and eggs was great, and the afterthought fit in nicely. My very memorable experience with the boys and their magazine will always hold a soft spot in my heart.

Mrs. Irene C. Swienton

Thanks for the compliments, Mrs. Swienton! Future Farmers will remember her as the author of the Wisconsin camping story in our previous issue. —Ed.

Jet, Oklahoma

I started vocational agriculture just last year and enjoy it very much. My teacher, Mr. Castle, sent in my subscription for me when I joined. Now I wish you could send it to me every month. My father also enjoys it very much. He says he either likes a magazine or he doesn't. He took one look at this one and liked it.

Charles Edwards

Bland, Virginia

I want to thank you so much for printing my article. I feel it an honor to have received space in the *FUTURE FARMER* for my challenge to the FFA. If I can ever be of help to you or the Magazine in any way, please let me know.

Bobby Munsey

Your offer is well taken, Bobby. Let's hope other Future Farmers feel as strongly as you and accept your challenge.—Ed.

Era, Texas

I want to commend the entire staff for the fine job you are doing. I always look forward with anticipation to the arrival of your magazine.

While I was at the National Convention, I was privileged to talk with one of your staff members, and he asked me my views. Most of the boys that I have talked with seem willing to accept the increased rates in order to receive more issues per year.

One of the most interesting parts of your magazine is the section devoted to letters to the editor. To me, it speaks well of the FFA for so many boys to write in their views. One view of mine concerns Mr. Charles B. Shuman of the American Farm Bureau Federation, who spoke at the National Convention. I do not hold his views against him, but I do not think he should express them to a strictly nonpolitical organization such as the FFA.

Jim Alexander

Sacramento, California

I'm inquiring about the 1964 FFA Calendar that was advertised in one of our agricultural catalogs. I would like more information on it.

I do not belong to the FFA because I live within the city limits. I do have two cousins who belong to the FFA, and from what they have told me, it must be very interesting. I would very much appreciate it if you would send me further information on how to join the organization.

Jay Malumphy

Zimmerman, Minnesota

I have never taken the time before to congratulate and thank you for the excellent magazine you are publishing. I have received *The National FUTURE FARMER* for the past three years and have found it to be very interesting and informative.

The free booklets are very helpful to me in school work, so I am sending for more this time.

Gerry Johnson

National FFA Week

ARE YOUR plans made for National FFA Week promotion? The dates for 1963 are February 16-23. The theme is "AGRICULTURE—Vital to America."

Local chapters and state associations throughout the country will plan their week-long activities around this central theme. And again this year, the national FFA office has prepared materials designed to help present this story to the American public.

FFA Week Supplies

Posters, seals, place mats, and other FFA Week supplies will be avalaible through the Future Farmers Supply Service as in the past. A catalog leaflet describing the supplies, together with a booklet of "Suggested Activities for FFA Week," will be mailed to local FFA chapters around December 1. Generally, the supplies offered for FFA Week in 1963 will be similar and at the same price as those offered for 1962.

Outdoor Billboard Poster

Outdoor billboard posters will also be made available through the Future Farmers Supply Service. These billboards will be printed in four-color and the same size as last year, 12 by 25 feet, and priced at $4 each.

"That's me," says Frankie Ruholl, left, of Mason, Kentucky, viewing the 1963 poster with Kenny McMillan.

In many states, the placement of billboards is an activity of the state association. Best results in getting posters used have been by contacting the State Association of Outdoor Advertisers and working through them.

It is planned for the posters to be delivered the first week in January. To provide this early delivery, it is necessary that orders for the posters be *received by the Supply Service by December 15*. Orders received after December 15 will be honored only if the quantity is adequate to justify a second printing.

What does it take to feel like a man?

It takes *action* to feel like a man. Takes *pride*, too, and good, skillful *training*. Join the modern Army's Combat Arms program and you'll have all three.

Pride? In Combat Arms it makes no difference whether you select Infantry, Armor, or Artillery. You'll be proud of any one of them. And you'll end up proud of yourself, too.

Action? In today's modern Army it's *go* all the way. Every unit is smooth, fast, and flexible. And every day brings fresh, new challenges. It takes real men to cope with them.

Training? In today's world nothing but skilled hands and minds will do. The whole Army is like a huge, well-oiled engine—with men and machines closely interlocked. It takes *men* to fit into this kind of picture.

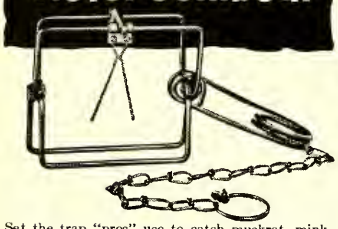
And of course you have other choices, too. Want Combat Support or Technical Training? Then ask for Electronics, Heavy Equipment, Transportation or Maintenance. It's as simple as that. If you're *qualified*, your choice is *guaranteed before you enlist*. Find out how to feel like a man in today's fast-changing world. See your local Army recruiter today!

SEND FOR THIS FREE!

Make money. Know how to break and train horses. *Write today for this book FREE*, together with special offer of a course in Animal Breeding. If you are interested in Gaiting and Riding the saddle horse, check here ( ) *Do it today—now.*

BEERY SCHOOL OF HORSEMANSHIP
Dept. 20212 Pleasant Hill, Ohio

Trapping is fun and humane with Victor Conibear



Set the trap "pros" use to catch muskrat, mink, skunk and other small animals . . . No. 110 Victor Conibear.

It's the only trap to win the *Certificate of Merit* from The American Humane Association . . . it catches and holds humanely. Sets almost anywhere —in holes, runways, cubbies—on ground, rafters, and poles—suspended under water, ice or snow.

Buy the No. 110 at your dealer's now. He also has Victor Conibear No. 120 for mink and No. 330 for beaver and otter.

ANIMAL TRAP COMPANY OF AMERICA • LITITZ, PA.

CHICKS
PULLETS
HENS

they all need...

PILOT BRAND OYSTER SHELL

all of the time!

PILOT BRAND Oyster Shell does much more than help you get more eggs with stronger shells. It helps to assimilate food, builds good strong bones, and promotes good health in all of your chickens.

For more and better eggs and better health, keep PILOT BRAND before your flock at all times.

PILOT OYSTER SHELL

In the bag with the big blue Pilot Wheel— at most good feed dealers.

For Poultry

Oyster Shell Products Company
Mobile, Alabama

Looking Ahead

FERTILIZER SENSATION BEING TESTED

Clemson scientists have developed a material called "Humate" that could revolutionize production of flowers and certain field crops. Refined from Leonardite, a lignite product found in Wyoming, it is blended with fertilizers for crop requirements. Near sensational results with increased yields and deeper plant colors, in many instances in only five days, have set researchers to work.

HOW MANY MILKERS?

Figuring on another unit to speed up milking? Don't do it, Illinois researchers say. Their studies show that an average man operating three bucket milkers in a stanchion barn milked fewer cows than if he had used only two units. Apparently, two milkers are the limit if cows are washed and primed before milking. Leaving units on cows too long also caused them to develop slow milking habits. Studies showed 9.7 cows milked per hour per machine using two machines against only 6.3 cows per hour with three units.

OPPORTUNITIES UNLIMITED

"Agricultural science is calling youth," a chemical firm manager said recently. By 1970, over 20,000 additional scientists will be needed to feed the nation's population. This is a 40 percent increase over today. Careers in agricultural chemistry, biology, and marketing, to name a few, must come from students in schools today. Spacemen will need food, possibly grown aboard their capsules, the chemist said. His plea to Future Farmers? Stay and train in agricultural technology.

INSTANT CALVES

Calves of the future may come out of your deep freeze. Animal scientists can take a young embryo out of a rabbit, store it, and then transfer it to another rabbit for birth. The embryo after removal is stored at a low temperature in liquid. Research on transferring calf embryos from cows with good ancestry to those of poorer backgrounds is already underway. This could result in eight to 10 top-grade calves per year from one outstanding dam. Selecting a calf from the freezer may come soon.

ONE-MAN FARMS ARE LARGER

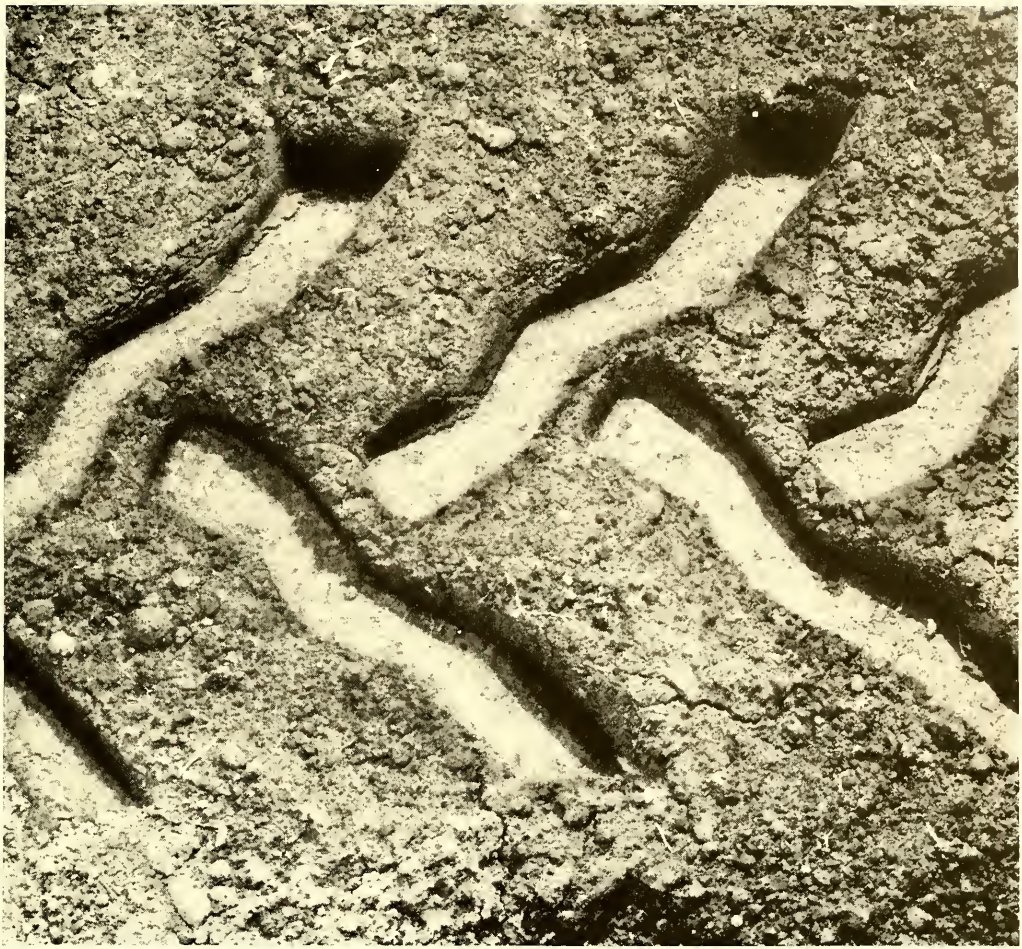
With all the talk about farms growing larger, ever wonder how large an average one-man farm is? Illinois researchers made the following observations: Average one-man farms are larger since most farmers rent land in addition to their own. Investments average $15,000 to $20,000. Land use is less intensive on livestock farms than on grain farms. The average Illinois one-man grain farm is 270 acres, while the livestock farm acreage average is 198 acres. Quite a jump over the former 160-acre, quarter-section farms.

FARMERS' CRYSTAL BALL

The average farmer will fare as well financially in 1963 as he did this year—maybe a bit better, Ohio State University experts concluded. Cash receipts will be up but will be wiped out by higher production costs. Net income per farm will be slightly higher due to fewer farmers, while consumer spending will go up in proportion. New additions to the labor force will exceed the number of jobs, however, so city cousins may face more unemployment.

CHICKENS TAKE NOTE!

There's no significant difference in egg production between cage and floor management, according to Dr. Homer Patrick of West Virginia University. Feed consumption, bird mortality, and egg quality were the same in tests made recently. However, caged layers required a higher initial investment, more labor, and drank more water than did their cousins on the floor.



Tracks to bigger farm profits!

You are looking at the footprint of the smartest buy in tractor tires today – Goodyear's revolutionary Super-Torque. Super-Torque is the only tire built to make *full* use of the higher torque in modern tractors. The reason: "Angle-Braced" lugs—lugs reinforced by multiple angles, much as structural steel is strengthened.

"Angle-Braced" lugs are up to 30% deeper—give you up to 40% more working rubber—take a deeper, bigger bite without bending under. They also put up to 28% more rubber on the road. Result: Super-Torque *outpulls* and *outwears* any other tractor tire. Yet costs very little more than "regulars." So be smart. Put these profit-angled tracks to work for you. Available only at your Goodyear Dealer or Goodyear Service Store.

OUR PLEDGE—If in a full season's use (90 days from purchase date) your Super-Torques do not prove to have better field traction and less tread wear than any other rear tractor tire (used under the same conditions for a like period of time), your Goodyear Dealer or Goodyear Service Store, upon return of the tires, will refund in cash any payment made plus any allowances made for your traded-in tires.

(This guarantee excludes comparison with special purpose rear Tractor Tires.)

Like all Goodyear tires, the Super-Torque also is guaranteed against defects in workmanship and material without time or mileage limits. Any Goodyear tire dealer in the U.S.A. will make allowance on a new tire based on original tread depth remaining and current "Goodyear Price."

GOODYEAR

Super-Torque – T. M. The Goodyear Tire & Rubber Company, Akron, Ohio

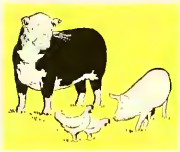
More Meat, Better Meat

...on the hoof, on the hook, on the plate
with Milk-Bank Feed Boosters by Kraft

Milk-Bank nutrition . . . it pays off all the way from the farm to the table. It's the extra nutrition of milk by-products in Kraft Feed Boosters—Kaff-A products for ruminants, Kraylets for hogs, Pex for poultry . . . the extra nutritional boost that means healthier, more productive livestock and poultry, faster gains, more feed efficiency.

And, as more and more raisers are learning, the Milk-Bank nutrition of Kraft Feed Boosters pays off in the marketing and in the eating, too.

BETTER GRADING, BETTER EATING

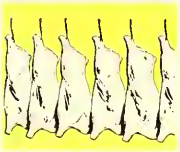


Swine, beef cattle, and lambs raised on these milk by-product feed boosters grade higher, in both live and carcass grading. They dress out better, with more lean meat. And that meat is more tender, more flavorful, juicier.

Poultrymen see the same benefits in broilers, turkeys, and layers raised on Pex products: Meatier birds, more flavorful meat, bigger eggs, better eggshell quality.

These improvements stem largely from the milk by-products in Kraft Feed Boosters. They provide nutrition that no grain ration alone provides, Milk-Bank nutrition. They're storehouses, or banks, for the key nutrients of milk: lactalbumin protein, milk sugar, minerals, vitamins, and important growth factors.

TASTE PANEL PROOF



When fed to broilers, Pex, the Milk-Bank Feed Boosters for poultry, help produce more flavorful, more tender meat. In a recent study, taste panels repeatedly selected chicken meat and broth from Milk-Bank birds over that of birds on ordinary rations.

Kaff-A Booster Pellets in beef cattle rations will improve live and carcass grading, boosting profits. For example, two groups of cattle on the same farm were fed the same ration, except that one group also got Kaff-A Booster Pellets. In the live grading, the Kaff-A group rated consistently higher—with 67.5% grading choice, against 35.5% choice for the other group.

The Milk-Bank Boost of Kaff-A Pellets also improved the dressing percentages.

Taste panels carried the comparison right to the dinner table, and again the Kaff-A fed animals were preferred—for meat flavor, tenderness, marbling, juiciness, and texture.

BONUS NUTRITION

Hog raisers see the difference, too, when they feed Kraylets in creep feeds and growing-finishing rations. They produce leaner, meatier hogs with good loin eye size, and backfat probes show substantially less backfat on Milk-Bank fed hogs.

Milk-Bank Feed Boosters help grading and meat quality by improving the over-all nutrition of a feeding program. They balance out a ration with vital milk by-product nutrients. And they unlock the full nutritional power of other elements in the ration, helping the animal gain faster and more efficiently.

Improve your feed efficiency, your grading, your meat quality, with Milk-Bank nutrition. For details on feeding programs, write:

KRAFT FOODS AGRICULTURAL DIVISION
Dept. R-12, 500 Peshtigo Court, Chicago 90, Illinois
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the people who make Velveeta cheese spread
and Miracle Whip salad dressing

NEW NATIONAL OFFICERS FOR 1963

Your new FFA leaders have a total of 34 years of FFA service to their credit.

Kenny McMillan, 20, from Prairie City, Illinois, is an ag science major at the University of Illinois. He is no stranger to FFA circles. Last year, as state president, he spent 281 days and some 28,912 miles traveling in the interest of FFA. He shares a 520-acre grain and livestock farm with his parents. He personally owns 34 head of Polled Herefords and is a partner with his father on a flock of 203 purebred sheep.

Jerry Diefenderfer, 18, hails from San Luis Obispo, California. Since 1958, Jerry has managed the 9,000-acre ranch of his grandmother 65 miles from town. A farm management major at Cal Poly, he travels several times a week to the ranch. Jerry grows 3,000 acres of dryland wheat, 150 acres of alfalfa, and has about 100 beef steers. He will become a full partner in the ranch at 21. An honor student, Jerry was president of the California Association last year.

Richard Mottolo, 20, is first national officer to reach that level through farm placement. Richard's parents do not farm. Consequently, when he entered vo-ag, he was placed on a dairy farm for work experience and to develop a supervised farming program. While serving as secretary, then president of his state association, Dick attended the Stockbridge School of Agriculture. He now works on a Chelmsford, Massachusetts, farm that includes dairy cattle, laying hens, and feed crops.

Larry Whittington, 20, is from Benson, North Carolina. Now enrolled at nearby Campbell College, the ag education major travels daily from the farm to college. The Whittington farm is under Larry's full management. His crops include tobacco, corn, cotton, soybeans, and small grains. He also feeds out about 150 hogs each year. Larry has just completed a term as president of the North Carolina Association.

Vern France is a 20-year-old farmer from Gooding, Idaho. He is past president of the Idaho Association and has repeatedly won in FFA public speaking. A full-time farmer, Vern holds a 10 percent interest in the 300-acre France farm. They graze 1,500 head of beef cattle on feed and grow alfalfa, grain, and silage corn on irrigated acres. Vern recently rented 60 additional acres and has a 50 percent interest in the crops grown on that land.

Duane Leach has spent his 20 years around Winnebago, Minnesota. He lives with his parents on a 160-acre farm plus another 160 acres they rent. The father-son team raises corn, soybeans, and hogs. Duane is enrolled at the University of Minnesota in ag education and last year served as treasurer of the Minnesota Association. He plans to finish college, find a farm near Winnebago, and go into the hog business. His 25 registered sows are on a 50-50 basis with his father.

Kenny McMillan, national president from Illinois.

Vern France is student secretary for 1962-63.

Dick Mottolo, vice president, North Atlantic Region.

Larry Whittington, vice president, Southern Region.

Duane Leach is Central Regional vice president.

Jerry Diefenderfer, vice president, Pacific Region.

Tough... as the men that wear'em!

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Lee RIDERS®

Photo courtesy Fabian Bachrach

J. W. Keener rose from analyst to president of Goodrich in 20 years.

MEET Foundation Chairman KEENER

BACKSTAGE at the National Convention, donors to the Future Farmers of America Foundation, Inc., elected a new chairman of the Sponsoring Committee for 1963. He is J. W. Keener, president and chief executive of the B. F. Goodrich Company, Akron, Ohio.

As head of the Foundation, which annually solicits over $180,000 from more than 350 top business and industrial companies, Mr. Keener will contact potential donors to help meet the Foundation's needs.

Funds from the many commercial and individual donors go toward award programs that stimulate higher achievement among vocational agriculture students in the 50 states. For this reason, the FFA Foundation, Inc., has been called one of the most influential organizations in the FFA program today. The Sponsoring Committee chairman for 1962, Bruce Lourie of Deere and Company, will turn over the year-long duties to Mr. Keener.

Mr. Keener is a native of Alabama and received his degree from Birmington-Southern College. After completing graduate work at the University of Chicago, he became a member of the faculty at Ohio Wesleyan College, where he remained until joining the Goodrich Company in 1937. In 1942, he became the company's first director of business research, was named assistant to the president the following year, and became president in 1957.

His executive background at Goodrich, besides being director of the Economic Club of New York and vice-chairman of the Automotive Safety Foundation, will prove invaluable to the FFA in the next 12 months.

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Please send details on CHERRYDALE FARMS "5-STAR" FUND RAISING PLAN and candy samples to

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ARE PASTURES PROFITABLE?
Economists say YES... cite returns of
$48 to $131 income per acre

Can pastures return attractive profits, even in times of high land prices and vertical integration? Look to typical per-acre incomes for the answer. Well-established pasture production figures can be projected to present-day livestock values with a fair degree of accuracy.

The vital ingredient to good income is pasture management—rotated and controlled grazing, fertilization and reseeding, and good land use. Under such programs, scientists and practical farmers have both tested and proved the economy of good pastures. Here are a few examples.

Beef Gains Worth $85

The Agricultural College at Lexington, Kentucky, produced 390 pounds of beef per acre on first quality land in a 227-day grazing season on mixed blue grass and Ladino pasture.

Dollar returns were more than $85 an acre, figuring the gains worth 22 cents a pound. Expenses were low for labor, capital improvements, purchased feeds, land taxes and interest.

$48 From Swine Pasture

Thirty midwestern farmers produced an average of 3150 pounds of pork per acre of alfalfa. By comparison with drylot feeding, the pasture saved 1009 pounds of grain and 535 pounds of tankage. Fifteen pigs were pastured per acre.

Income amounted to $48.38 per acre when figured at average 1962 corn and supplement prices—$1.20 per bushel for corn, $100 a ton for tankage. In addition, the labor required for feeding on pasture was much less than it would have been had the pigs been fattened in drylot.

Milk Brings in $131

Agricultural research scientists at Wooster, Ohio, produced 4330 pounds of milk per acre on good pasture in a single grazing season. Each cow in the study received 5½ pounds of grain per day in addition to the pasture forage.

Each acre returned $131.50, figuring milk at $3.50 per hundredweight and grain at two cents per pound.

Range Returns: $2217 Per Section

Short-grass range at the Central Plains Experimental Range in Colorado, produced more than 10,000 pounds of good quality beef per section in a six-month pasture season. Managed grazing was the key to high production.

Using a value of 22 cents a pound for beef, range returns added up to more than $2217 per section.

Pasture Booklet—FREE

Valuable information about pasture improvement, utilization and management is available in a booklet published by Keystone Steel & Wire Company, Peoria, Illinois. The title is *Pasture—How to Reduce Feed Costs*. In it are reports from practical farmers

and research scientists telling how to get good incomes from pastures. It is chock-full of money-making suggestions. Why not clip coupon below and order your FREE COPY today?

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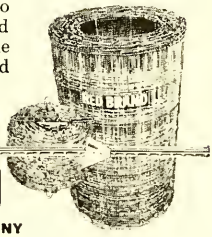

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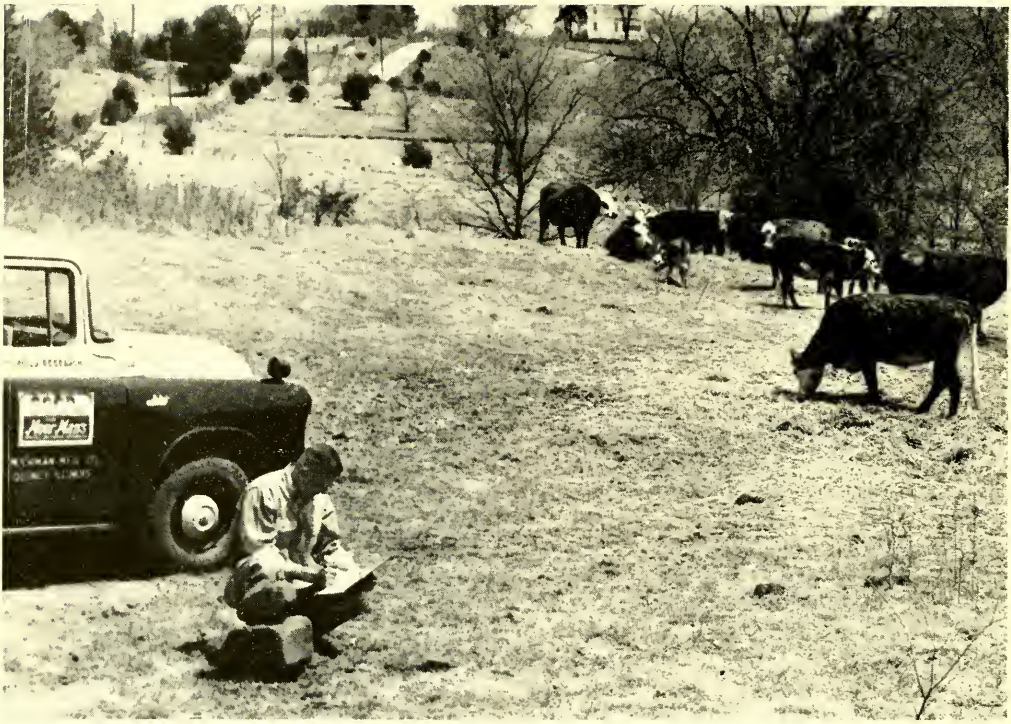

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Sure, we lab-test ingredients and methods in our modern research laboratories. We also run controlled feeding tests on our 1280 acres of research farms in Quincy.

But the real story can be told only by results in farm herds and flocks through on-farm records.

Practical tests in many states

At MoorMan's, "Field Research" is more than just a fancy name. Every Mintrate* or other MoorMan product gets a thorough workout on farms and ranches before it's made available to all poultry and livestock producers.

Products adapted to many conditions

Why do we do this? Mintrate Blocks are a good example.

We make 10 different kinds of Mintrate Blocks, with several different formulae and varying levels of palatability.

Here's why: Three years of field research—before a single Block was marketed—showed that no single self-feeding protein-mineral-vitamin Block fits all local soil, water and roughage conditions or feeding situations.

So, thousands of beef, dairy, hog and poultry feeders cooperate with us to give our products a final test. They help us find out how MoorMan's can wring more milk, meat and eggs from the grain and roughage you feed your livestock.

Laboratory tests and controlled feeding are vital research tools.

But grass roots research—by the feeders themselves—always gives us the final answer.

More profit with your grain, roughage and

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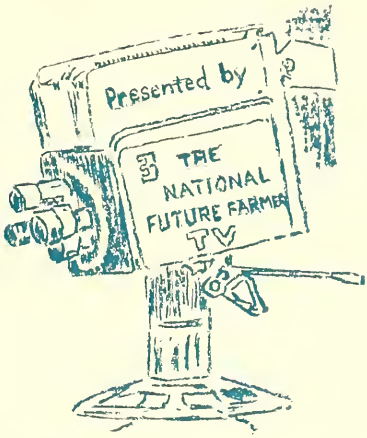
THE 35TH NATIONAL FFA CONVENTION



Here's your set and you are tuned in on your recent 35th annual National Convention in Kansas City's Municipal Auditorium.

"THIS IS Station WFFA-TV's mobile crew on location in Kansas City at the largest farm meeting in the world. For the next three pages we'll take you on a guided tour of the FFA's National Convention, held October 10-12. From here it looks like an action-packed program. Stay tuned, won't you?

"Every conceivable type of transportation brought nearly 9,000 Future Farmers, vo-ag instructors, newsmen, state office personnel, and foreign guests to this huge auditorium. We've been informed that there will be achievement and service awards, judging contests, speeches, banquets, and even some imported entertainment. We'll relay the news as soon as we get it. Last evening, a vespers service was held with a large number of early arrivals present.

"The 114 members of the FFA's 'mail order band' are playing below us for the opening ceremony. The band is called that because members are recruited through the mail. New Band Director R. Cedric Anderson soothed out the rough spots a few days ago. Kansas City's amiable mayor, Roe Bartle, has told the Convention to 'strive for perfection,' before presenting the keys to the city to FFA President Victor Butler.

"The national officers have just presented Honorary American Farmer Degrees to outstanding individuals. Forty-six men who have given dedicated service to the FFA were honored. We understand there are 11 degrees given to education executives, 10 to the fathers of both the national officers and the Star Farmers, and 25 to outstanding vocational agriculture instructors.

"Four national public speaking finalists are grouped on the stage. Looks like Michael LaSalle, California; Jerome Broadhead, North Dakota; Gary Green, Pennsylvania; and Gary Butler, Oklahoma. Here's a flash! Gary Butler has won with his speech on 'Our Soil and Our Freedom.' Now they're turning to the presentation of the Gold Emblem Award to a whopping 69 worthy chapters. That's quite a lot!

"We'll move up to stage area to cover the awarding of Distinguished Service plaques to 13 men who have contributed

"Camera One shows the official delegates, 100 strong, from 49 states and Puerto Rico. These young men represent the members from back home. Can you pick out your state?"

"There's a new director with the National FFA Band down there. He's Professor R. Cedric Anderson of Cedar Rapids, Iowa, and doing a real fine job too."

"On stage, there's Mayor Roe Bartle presenting Vic Butler with the keys to Kansas City, including even the jail, he explains."

Turn page for more TV coverage of the 35th National Convention.

a great deal to the FFA, yet work outside of vocational agriculture. These men represent four publications, six commercial companies, and three are independents.

"The releases are coming in on the national farm proficiency awards. Here's the list. Farm Mechanics—Robert Reppert, Nebraska; Electrification—Robert Denune, Ohio; Soil and Water Management—Ralph Dunn, Virginia; Crop Farming—Gordon Schuppe, Colorado; Livestock Farming—Merle Buss, Oklahoma; Poultry Farming—Rod Bruland, Washington; Forestry—Danny Fender, Georgia. In addition, the Dickson, Tennessee, Chapter has won the Farm Safety Award.

"It's almost time for the naming of the 1962 Star Farmer of America. We've just seen a color movie on all four Star Farmers, and the last of the 50 representatives have passed beneath us in the flag massing ceremony. Here's the announcement—Warner Ross of Bolivar, Tennessee, has it! The second year in a row that Tennessee has had a Star Farmer of America!

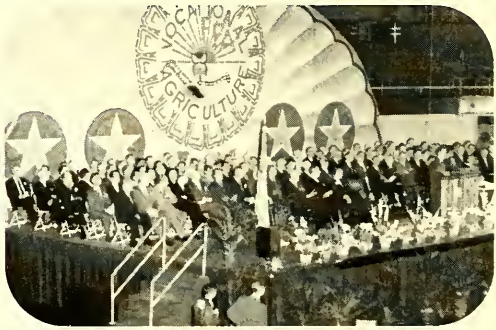
"I'll read this release on activities at Waterloo earlier this month. Jan Turner from Morgan, Utah, has been named 1962 Star Dairy Farmer. Regional dairy farmers are Harry Hodge, Connecticut; Gary Null, Missouri; and Gary Helt, Oklahoma.

"Last minute reports from out at the American Royal list three top winners in the FFA livestock show there. Champion FFA steer belongs to Richard Land of Ridgefarm, Illinois; FFA market hog champion was Darrell Fortune's, the Jones, Oklahoma, Future

"Number Two Camera has eight Honorary American Farmers in view. Each rendered outstanding service to FFA."

"Twenty-five vo-ag teachers now on stage have earned Honorary American Farmer Degrees through service, records of students, and their chapters' achievements. They represent 15 states and a total of 10,000 instructors."

"Switch with us now to this group of 382 blue jackets. They were made American Farmers, the FFA's top degree."



"Those men represent the 350 donors to the FFA Foundation. Vic Butler extends appreciation of all FFA members."

"Proud members of the families on stage with the four Star Farmers. We'll move in for a close-up of the winner later."

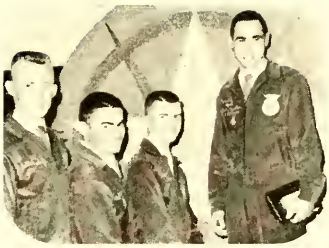
"The crowd's quiet! Dr. Ben Willis, Chicago's superintendent of schools, has the floor."

"Close-up for Gary Butler, national public speaking winner from Mooreland, Oklahoma."

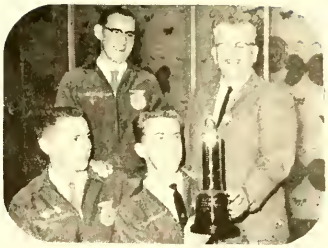
Farmer; and the top FFA fat lamb belonged to Gary D. Helt, Kingfisher, Oklahoma.

"It is impossible for our roving camera to catch all the activities of this big Convention, but we understand complete convention proceedings will be mailed to each chapter later.

"The new national officers have been elected; the first of the Firestone Show is on stage. Looks like that's all from Municipal Auditorium, so we'll switch you back to the 8,476 FFA chapters across the country."



"Here's that close-up! Star Farmer Warner Ross with regional winners."



"J. O. Beadle's Galesville, Wisconsin, team won Livestock Judging Contest!"

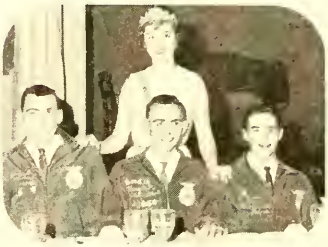
"Thanks, Mr. Lourie! Audio beams Vic Butler's remarks to Foundation chief."

"Jerry Litton, national FFA secretary in '56-'57, addresses the Convention."

"Back to Blooming Prairie, Minnesota, goes this Meats Judging trophy."

"The eight national winners of farm proficiency awards mug our cameras."

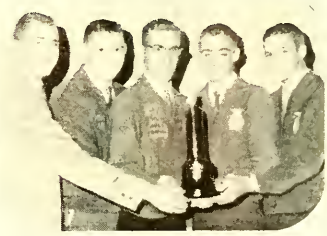
"A distinguished guest dropped in for a while—ex-President Harry Truman."



"Now to Waterloo! Dairy Princess Sandy Tibeau and Star Dairy Farmers."

"Let's take time out for entertainment by Charles McIntosh, Florida organist."

"Time out to drop by the FFA reception to honor the Foundation donors."



"We posed this Bainbridge, Indiana, group after they won Dairy Judging."

"The FFA doesn't forget its friends. These men received distinguished service awards."

"These Pine City, Minnesota, FFA'ers are winners of National Dairy Products Judging."

All photos by Arch Hardy

SELECTING FOUND

Selection of Hogs

The animals you purchase while in vo-ag often become the very nucleus of your livestock in years to come. For that reason, you should buy the best animals possible. These three specialists tell you how to do it.

YOU, NO DOUBT, have heard the statement, "A good boar is *half* the herd, and a poor boar is *all* the herd." This statement suggests the importance involved in selecting the boar to sire your next crop of pigs. The same importance for careful selection can be attached to selecting replacement or foundation gilts. There are many tools available to help you make these selections.

In the past five years such terms as certification, testing, feed conversion, and certified meat sire have become commonplace in the vocabulary of successful pork producers—both purebred and commercial.

We must not be misled into thinking that because a boar or gilt is from a certified meat litter, it will be good and will correct all the type and performance problems in your herd. By the same token, a boar or gilt from a litter that just missed certification may still contribute good genetic material to your herd. In short, you need to look at the "report card," recognizing the conditions under which the records were made. Then with a good visual appraisal, note any unsoundness or off-type and decide if this boar or gilt will help correct the weak spots in your herd without sacrificing the good traits.

In evaluating testing data, one should keep in mind the following facts:

1. The ration influences rate of gain, feed efficiency, and carcass leanness. Pigs self-fed a high-energy ration (one with a low percentage of bulk or fiber) grow faster, are more efficient feed converters, and are usually fatter than pigs fed a bulky ration or a limited amount of feed.

2. The growth stage when pigs are tested will affect the results. The effect here is mainly on feed conversion—as a pig becomes heavier, he becomes less efficient. Therefore, we would expect pigs tested from 50 to 150 pounds to have better feed conversion than if they were tested from 50 to 200 pounds.

3. Sex of the pigs has an effect which is illustrated in the following table of data taken from pigs fed and managed alike.

Rate of Gain and Feed Conversion

	Boar	*Gilt*	*Barrow*
Backfat (in.)	1.3	1.5	1.6
Carcass length (in.)	30.5	30.2	29.8
Loin eye (sq. in.)	4.5	4.0	3.8
Daily gain (lbs.)	1.86	1.55	1.67
Feed per lb. gain	3.00	3.38	3.46

4. Weather affects a pig's performance. Pigs tested in the winter would be expected to have poorer feed conversion and slightly slower rates of gain than if they were tested under warmer conditions.

Many progressive purebred and commercial pork producers are demanding testing or certification information when they go in search of a herd boar or replacement gilts. We must understand this information and use it wisely.

As mentioned earlier, there are certain traits that are not measured directly in the testing programs now in use. Such characteristics as soundness of feet, legs, and underlines are important. With the trend toward more confinement feeding, it is more important than ever for pigs to have strong pasterns and straight legs.

The old adage "useless as teats on a boar" no longer applies. It is important to select a boar, as well as gilts, with at least six evenly spaced, functional teats on each side, since gilts inherit this trait from both parents. Some breed associations now require 12 teats for registration of both boars and gilts.

You may also use the pedigree as a guide in your selection. Although the pedigree has a number of limitations, such as lack of information of the environment in which the pigs were raised, it may serve as a guide for one who knows the breed well.

In summary, when selecting breeding stock, we should look for boars and gilts from healthy herds that have good prolific records behind them; adequate length; evidence of muscling as indicated by thickness through the ham; large, rugged bone (which also indicates muscling); and freedom from unsoundness, particularly of feet, legs, and underlines. *James R. Foster, Swine Specialist, Purdue.*

Buying a Bull

LIKE ALL phases of agriculture, beef cattle production has moved into a scientific era. In the past 20 years science has so taken over the field of production that now the test tube and calculator are ever present.

Cattle meeting modern needs must possess three characteristics. First, they must be productive and have the ability to reproduce at a profitable rate. Second, they must have the ability to grow rapidly and efficiently on the feeds available to them. Thirdly, they must have beef conformation and quality of carcass.

When selecting a bull or replacements, it is a good idea to check their background. This can be done easily in herds that are performance testing. The only way a beef producer can be certain of what he is getting is to look into the performance records of the sire and dam of the cattle he is interested in.

Check first on the sire of the animal in question. Has he been siring the kind of cattle you want? Do they have the beef conformation you need, and does his progeny grow fast and economically? Look into the dam's record. Has she been calving regularly? Does she give an abundance of milk and push her calves along at a rapid rate? Do they have the beef conformation and other qualities you want? After making certain of the animal's background,

analyze the individual you are interested in buying.

Keep in mind that two or three people have to make a living on this beef animal you are going to produce. The feeder calf producer needs a heavy calf at weaning and one that grades high. Select a bull that has a high weaning weight. This indicates not only that he inherits rapid growth but also that his mother was a good milker and a good provider of feed and care for her offspring. Make certain that the calf's grade is high at weaning time, since this is the price-setting factor.

In order to take care of the second person, the cattle feeder, make certain that the bull in question has the ability to grow rapidly and efficiently. This can be easily determined by the standard 140-day feed test. Also, take a look at his 365-day weight. This significant record represents a combination of his ability to grow from the time he is born until he is a yearling or until the time he should go to market.

Thirdly, where possible, select bulls which have a background of carcass quality. We have not moved as far in this field as we have in quality and growth, but it will be prominent in cattle selection in the next few years. The butcher and consumer are interested in carcass quality, and since they are the ultimate customers, then you, as producers, must be concerned.

After having satisfied yourself with the performance records of the bull, take a look at his conformation. Thickness and muscling are the most important characteristics a bull can have. The set of the legs is the next most important characteristic because this reflects the skeletal structure of the entire body. With thickness and muscling and a good set of legs backed up by proper records, you are bound to have a money-making bull.

There are other things you want, such as balance. Does every part of the bull seem to fit together? Are his lines straight? Does he have plenty of strength in his top? Does he have a good head? All of these things make him attractive and pleasing to the eye and have something to do with the price of his offspring.

Remember, productiveness, ability to gain, and quality are the three major characteristics you must have, backed up by good records. If you obtain these qualities in selecting your foundation beef cattle or herd sires, you will have a profitable herd meeting today's standards. *C. C. Mast, Animal Husbandry Dept., Virginia Polytechnic Institute.*

Selecting Foundation Ewes

IN SELECTING foundation ewes for either a purebred or a commercial operation, keep these five factors in mind: breed, conformation, soundness, pedigree, and performance record.

1. Breed: Select a breed that will do well under your particular type of operation and on the kind of feed you have available. The popular breeds in the United States vary considerably in their ability to thrive under different feeding programs and under individual conditions of climate and weather. Check on breeds that have done well under situations similar to your own.

In a purebred enterprise it is extremely important to raise sheep that are popular in your area. Most of your sales will be made within a 200-mile radius of your farm or ranch. Most breeders need local buyers to make a purebred program profitable.

2. Conformation: Select wide, deep, heavy-bodied ewes that show thrift and vigor. Especially look for development in the areas that count—the loin and the leg. Pick the ones with lots of bone and enough size and scale to do their job. It is a well-established fact that big, heavy-bodied ewes will produce more pounds of lamb and wool than small ewes. Also, open-faced ewes have proven more productive than those that are wool blind.

In selecting ewes of the wool breeds, pick those with dense, long-stapled, uniform fleeces of the wool grade that is best suited for your operation.

3. Soundness: Select only ewes with good solid mouths. Eliminate all overshot or undershot jaws. Make sure the feet and legs are sound. Look for straight, strong pasterns, straight legs, and good hocks and knees. Sound udders are a must; on the wool breeds eliminate any serious heritable defects in the wool such as kemp, britchiness, colored fibers, and belly wool.

4. Pedigrees: Sound, productive breeding lines are important in the establishment of your flock. This is especially true in setting up a purebred operation. Certain families and individuals within each breed have done better jobs than others. Select animals from strains proven to be productive. Go to a reputable, established breeder who has taken pride in the pedigrees of his animals and who has handled his breeding program accordingly.

5. Performance records: Regardless of how careful you are in selecting the first four factors, the final value of a ram or ewe is determined by its ability to produce pounds of top-quality lamb and wool. In general, those that rank highest in visual characteristics will usually do the best job of producing what you want.

In selecting your foundation ewes, pick those that have high weaning weights and heavy yearling fleece weights. Wyoming sheepmen are finding that ewes of similar type and size are varying as much as 30 pounds in the weaning weights of their lambs.

Which Ewe Would You Buy?

These ewes are similar in type, conformation, and size. They are not similar in their performance. Here are one-year records on their lambs:

	A	B
Lambing date	3-11	3-5
Sex	ram	ram
Type of birth	single	single
Age of dam	5	5
Weaning weight	93	63
Corrected weaning weight	94	62
Type score	40	30
Wrinkle score	6	9
Face covering score	8	5
½ staple length (mm.)	20	15
Density score	18	16
Uniformity score	18	16
Index score	204	153

E. K. Faulkner, Livestock Specialist, University of Wyoming.

Address given at the Convention by Colorado's Evan Green, finalist, 1961 National Public Speaking Contest.

THE FFA jacket we're wearing, fellow Future Farmers, sets us apart. We are not, in the eyes of most people, a "run-of-the-mill" product. We represent a "select" specimen. We are the human crop, harvested from the farms of our community. To produce this crop, our parents have given unselfishly their love, money, tears, work, and devotion.

The name of our chapter is easily read by the passer-by, and the golden letters on a blue field tell the world we belong to a great organization. Our family name and our first name, which usually indicates an inherited name of some favorite man of our clan, are there on our beautiful FFA jacket for all men to admire—and they will—if we deserve the honor our jacket is designed to convey.

It is our obligation to conduct ourselves in such a manner that we will not degrade the great agricultural group the jacket symbolizes. When we don this cloth, we should think of it as a soldier does the uniform he wears, the flag he carries, and the oath he has taken.

Our colors of blue and gold carried out in the design of our jacket mark us as young men chosen to represent the best we have in agriculture. So it is important that we properly conduct ourselves on our farms, at FFA conventions, in town—any place we may go so that this great and meaningful emblem of our FFA will be honored.

People who are watching will admire and respect today's students of vocational agriculture who are preparing for successful establishment in tomorrow's agriculture.

If civilization loses respect for agriculture and those who are responsible for its stature in the world, we will be held responsible. However, if American agriculture is to continue to be the envy of the free world in its ability to produce food and fiber and be basic for our continued economic and social stability, then we must be proud that the world is looking at us today.

As we accept the dignity of wearing the jacket with the colors of FFA into the battle of life, may the world be pleased with the deeds performed by Future Farmers. When people see the FFA jacket, they must know we are being trained as farmer-citizens. We must wear the jacket with pride; we must NOT wear it if we do not value its significance. God advised that we should not throw our pearls to the swine. Neither would you put an FFA jacket on a member who shows by his behavior that he has few or no manly traits. He who wears the FFA jacket should deserve it, not only in his own estimation but in the estimation of all who may see him.

The people of America look to the FFA to provide many great leaders for agriculture. Fellows, let us mold our character as well as our body to that worthy emblem on the jacket we wear as members of the FFA. Yes, we are the Future Farmers being trained to produce food and fiber, but we must also be prepared to solve the challenging problems of agriculture. Farming ability alone is not enough since this task will demand men of the finest caliber, the greatest character, and mature wisdom. Therefore, Future Farmers, let us be careful—our jacket is showing.

Be Careful Your Jacket is Showing

- The jacket should be worn only by official members of the organization.
- It should be kept clean, pressed, and neat at all times.
- The jacket should have only a large emblem on the back, a small emblem on the front, the name of the state association and the local chapter on the back, and the name of the individual and his office on the front.
- It should be worn with the zipper fastened nearly to the top with the collar turned down and the cuffs buttoned.
- It should be worn on all official occasions and when the chapter is represented, and may be worn to school and other appropriate places.
- School letters and insignia of other organizations should not be attached to or worn on the jacket.
- When the jacket becomes faded and worn, it should be discarded or the emblems and lettering removed.
- The emblems and lettering should be removed if the jacket is sold or given to a nonmember.
- When the jacket is worn by a member, he should conduct himself in a manner that would be a credit to the organization.
- No more than three medals should be worn on the jacket. These should represent the highest degree earned, the highest office held, and the highest award earned.

Ice-free Water for Livestock

By Harold E. Stover

ONE OF THE MOST important requirements for livestock production is an adequate supply of water. The best feed in the world with all the supplement, minerals, and other ingredients will not give you top livestock production unless water is available constantly. For example, milk contains 87 percent water, beef 72 percent, and eggs about 73 percent. All of these emphasize the high water requirements of livestock.

During the winter months when water freezes easily, it is often difficult to provide ice-free water. Research at Iowa State University emphasizes the importance of keeping water supplies from freezing. During a 42-day period in December and January, swine on automatic, electric-heated fountains gained 10 pounds per head more than those that were hand watered. The water for the hand-watered stock soon froze.

In another test, dairy cows given access to ice-free water produced over 6 percent more milk and 12 percent more butterfat per head than those watered from tanks subject to freezing. The cattle on ice-free, automatic waterers drank 18 percent more water.

Types of Heaters

There are many types of water-heating devices for livestock use. Some of these are fuel-fired and others are electrically operated. The former can be operated with wood, fuel oil, natural gas, and liquefied petroleum gas. These units are usually made for a standard open livestock tank and are expensive to operate. Research has found, however, that it is much more economical to heat a small quantity of water, such as in a watering fountain, with electricity. It can be controlled by thermostats for automatic operation, and it is very economical to operate.

Selecting a Heated Waterer Device

Basically, the nonfreezing automatic waterer is a small tank or bowl that is supplied with water from a pressure or gravity system. It has a float valve to control the flow of water and an electric heating element and thermostat to prevent freezing.

A study was made at Kansas State University on the advantages of an electric fountain-type waterer versus an open stock tank deicer unit. The open tank heater unit used over three times the amount of electricity as compared to the insulated automatic fountain located in a sheltered area. This study illustrates the benefit of an insulated tank for use by livestock.

Waterer Should Fit Needs

There are many factory-built, electrically heated watering tanks now available through commercial channels. These are especially designed with insulated walls and automatic thermostat for economy of operation. They have only a small surface area exposed to the weather.

The floating surface heating units are designed for use in an open tank regardless of size. Under average freezing conditions, these units will usually keep a two-foot radius free of ice. That is the reason they are called deicers. During extreme weather, they may keep only a few inches around the unit ice free. For indoor use, this unit should be adequate.

If the waterer is to serve both cattle and hogs, you may want a combination unit. But be sure to choose a unit no larger than your needs. This will keep costs to a minimum. A waterer that will prevent water from the bowl from siphoning back into the water lines is recommended to prevent contamination of the farm water supply.

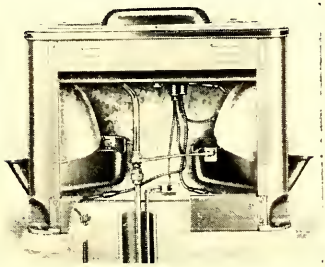
Waterer Construction

After you have chosen the type and size of unit, plan for sturdy construction. The waterer should be fastened to a good base, since it will get "heavy abuse" from cattle and hogs.

Inlet and storage capacity of water bowls vary with size of animals. Connecting pipe should be not less than three-quarter-inch for water lines up to 50 feet in length. For distances over 50 feet, the pipe should be not less than one inch. As long as this water is held at 35 to 45 degrees, the water valves and inlet will not freeze.

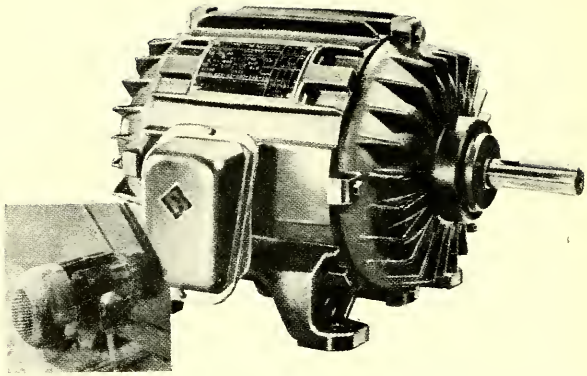
(Continued on Page 46)

This view of an automatic waterer shows the electric heating unit at the top with a ground at bottom, left side.



Installation of waterer units near buildings minimizes problems from cold weather.

Electric Motor Maintenance



Electric motors operate best in a clean environment. Avoid dust (lower left).

By Melvin E. Long

Inadequate wiring, poor lubrication, and pesky rodents can cause costly breakdowns. Here's how you can prevent them.

USUALLY electric motors cause so little trouble that they are liable to be neglected entirely. However, systematic care and protection can greatly increase the useful life of your motors.

Here are some suggestions for good motor care:

1. Provide adequate wiring—It will pay to get the services of an experienced electrician when adding a new motor to the farmstead. If the wire size is too small, excessive voltage drop occurs when the motor is operated. Then, the current flow increases, which in turn causes heating in the wiring and the motor. If the current consumption doubles, the heating increases four times.

2. Reduce overheating — This includes selecting the right type motor for the job, eliminating friction in the driven machine by aligning parts correctly, and not attempting to use a motor that is too small for the job.

3. Provide overload protection—This can be of several types. Although not normally provided as standard equipment, most present-day motors are available with built-in overload protectors. Inexpensive "time-delay" fuses are also available for motor protection.

They are inserted in the regular-type fuse boxes and are designed to carry the high current necessary for starting. However, they will "blow" under a continued overload. The starting current value listed on the name plate of the motor is used as a guide in selecting the correct size of this type fuse.

4. Protect against dust and dirt—Most motors use a switching device to change the current flow after the motor is up to speed. Dust will hamper the operation of this switch, which can cause the motor to burn out. Dust and dirt are just as harmful to motor bearings as they are to bearings on machines. They can also combine with moisture or oil to form gummy deposits on the insulation, causing early breakdown of the insulation and a burned-out motor.

5. Special care for seasonal motors —Motors used seasonally and then allowed to remain idle for long periods need extra attention. Otherwise, the storage period may be more harmful than the use period. Before storing, wipe off all dust, dirt, grease, and oil. Use compressed air or a tire pump to blow out dry dust. Check and relubricate according to the manufacturer's recommendations. Then store in a clean, dry place.

6. Lubricate regularly and properly —A motor equipped with sleeve-type bearings generally needs lubrication about two or three times a year. A ball-bearing equipped motor needs lubrication only once every two or three years when in average service. Spring or early summer is the best time to lubricate, as the old grease is softest then and can be readily forced out.

Do not overlubricate. This is as harmful as insufficient grease. It's a good idea to tag each motor and record the date of each greasing.

7. Screen against rodents and birds —All openings large enough to admit rodents or birds should be screened with ¼-inch mesh screen. Motors are not generally supplied with screens because the manufacturer has no way of knowing for what application his motor will be used. Screens in kit form are available for some makes of motors. If a motor is purchased as part of another farm machine, it will generally be screened. However, it's wise to check this item when shopping for equipment.

Some farmers prefer to do their own wiring. If you have the know-how and the necessary tools, you can save considerably on the cost of installation. However, be sure that you conform to the electrical code of your power company and the recommendations of the equipment manufacturer.

It will generally pay to have a registered electrician or inspector approve your circuits and materials. Be sure you know what you are doing; then do the job properly. Short cuts usually prove to be very expensive in the long run.

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Indiana Future Farmers Expand Their Supervised Farming Programs With Their Own

Junior Production Credit Association

By
Jim Napier
Indiana State FFA
Reporter

WHEN MELVIN DUNK needed money this spring to put in his corn crop, he went to fellow Future Farmers at East Tipp High School near Lafayette, Indiana, to negotiate his loan.

Melvin is one of six students to take advantage of a new organization chartered this spring by the East Tipp FFA Chapter. It is called a Junior Production Credit Association, a 27-member organization run by Future Farmers for fellow students. So far the junior financiers have loaned $400 for livestock and crop projects.

The East Tipp Junior PCA is the first such organization to be formed in Indiana by an FFA chapter. Parent organization is the Tippecanoe County PCA.

The fact that the loan committee was comprised of other students didn't make Melvin's negotiations any easier. He met the first requirement readily enough—it had to be an agricultural enterprise.

Next he had to prove the need for a loan—in his case $170—and to establish the profit potential of his corn project. This is one of the purposes of the Junior PCA: to show members how to use credit wisely as a means of increasing production and profits of the farm business.

Melvin came up with these figures: $95.50 for liquid nitrogen (100 pounds actual nitrogen per acre on eight acres), $56 for 1,200 pounds of 7-28-14 (150 pounds per acre), and $18 for hybrid seed corn. Returns could be high. Melvin is shooting for 100 bushels per acre, and at $1 per bushel, could gross $800, he told the committee.

The plan had to be approved by his parents, Mr. and Mrs. Everett Dunk, and by the PCA advisor, Ted Brown, head of the PCA branch at Delphi, Indiana.

Another reason for the Junior PCA, of course, is to teach members the actual mechanics of obtaining credit, including the use of such legal instruments as notes, chattel mortgages, and sight drafts.

Melvin had to fill out a loan application blank, a necessary early step in seeking a loan. Then he was interviewed by the loan committee made up of Future Farmers, and his operation was visited by Harry Latshaw, president of the junior group.

Such loans are used to help a member start or expand a farm project. The committee also considers whether the project is one in which the member might reinvest his earnings.

After Melvin's loan was approved by the junior loan committee, it then had to be approved by the board of directors of the parent organization. The senior PCA board makes each loan final or, in some cases, suggests changes that would benefit the borrower.

The loans made by the Junior PCA, including Melvin's, are secured by note and chattel mortgage so that the risk need not be shared by the other members. The rate of interest on Melvin's loan was 5½ percent, the same rate of interest offered commercial farmers by the Tippecanoe County PCA. The length of the loans is fitted to the project. Most are seasonal, but Ted Brown sees the possibility of some two- and three-year loans.

The Junior PCA was organized with the help of John Reagan, secretary-treasurer of the local PCA and head of the Lafayette branch. The student officers, besides Harry Latshaw, are Richard Fisher, vice president; Robert Albregts, secretary; and Paul Cain, treasurer.

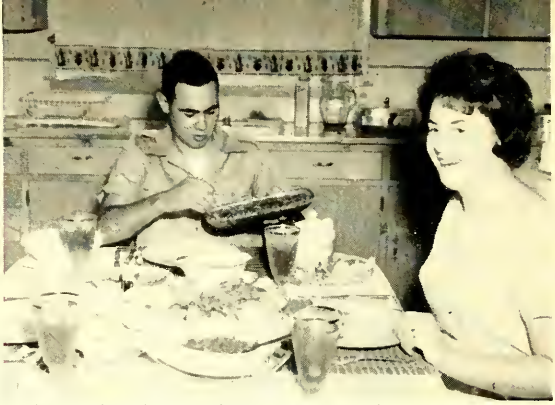
If Future Farmers want to borrow money, many ask why they don't go to the senior organization in the first place.

There is much to be gained by letting the members process their own loans, believes Avery Gray, advisor to the East Tipp FFA Chapter.

"The boys have learned more about how loans are made than would be possible in a year of teaching," he says.

Ted Brown adds, "The Junior PCA is still in its infant stage, but it has more than proven its worth in educational value as well as helping FFA members get started or better established in their enterprises." ◆◆◆

The brightly lit stage, the cheering thousands of Future Farmers, Kansas City, the 1962 National FFA Convention . . . these are now but memories and dinner table conversation for Warner A. Ross, 1962 Star Farmer of America. Come with us on a visit . . .



"What's a farm home without a devoted wife?" Warner's wife, Janie Sue, does her part with household duties.

At home with the STAR FARMER

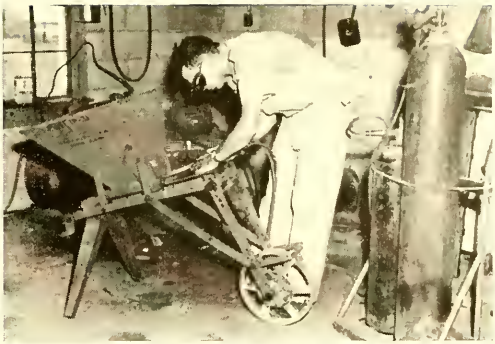
By Paul Weller

Fine foundation stock such as this registered Hampshire boar have been part of the story behind Warner's success.

Carefully balanced rations are personally metered out under Warner's watchful eye. He and his father have over 160 cows.

"A good farmer is a clean one," the Star Farmer agrees. His spotless milk tank is proof that he practices what he preaches.

Arrow-straight rows with a definite absence of weeds. That's the best description we know for his 95 acres of cottonfields.



The surprising efficiency of Warner Ross's farm operation can be traced time and time again to his well-equipped shop.

IMAGINE yourself on a personally escorted tour with Star Farmer of America Warner Ross. He heads his pickup into a lane on the 1,292-acre Ross farm. You have traveled to the small town of Toone in Hardeman County, Tennessee, just north of the Mississippi line—then a few miles out to meet Warner at the Curtis Ross and Sons spread.

The three combined farms bordering this lane have taken on a new look in the past seven years since 21-year-old Warner entered vo-ag at nearby Bolivar High School. What has changed? He'll lean over and explain. "It's fun to take a piece of worn-out, overgrown land and make crops grow on it," and you need no further explanation.

The pickup comes to a halt beside the new farm home Warner helped build for his bride, Janie Sue, before their marriage. A warm invitation to enter, and the pretty brunette goes for her husband's scrapbook. Here's how it all started.

In the fall of 1955, Warner's father gave him an old tractor and five Holstein heifers, and he was on his own. He purchased other livestock with profits from milk and offspring from the heifers. "Most equipment was purchased with money borrowed through the PCA program," he'll add. More land was financed through farming profits and from the lime and sand business his brother now operates.

Another page in the scrapbook—"I gave my father one half of the gross income from the projects, and we divided all the expenses," is his narrative.

During the December following graduation from high school, Warner sold his assets to his father and bought a one-third interest in the family operation, including the extensive lime and sand operation. All income is put into the bank under the Curtis Ross and Sons name and divided equally.

You can see memoirs from his experiences as president and chaplain of Bolivar FFA Chapter, secretary of the local district, state reporter, and finally Star Farmer of the Southern Region.

Another page will tell you how Warner, under the supervision of his vo-ag instructor, G. C. Bartlett, had complete responsibility for the 422-acre farm while in high school. It included 20 dairy cattle, 87 hogs, and 110 acres of cotton, alfalfa, and silage. Now follow Warner outside to see his present-day farming operation.

Responsibility for managing the nearly 1,300 acres has fallen to Warner since his graduation two years ago. Mr. Ross works full-time off the farm, while younger brother, John, manages the lime and sand enterprise. The Army surplus bulldozer you see was bought by Warner to clear areas of the farm for production. It's only been a matter of months since he cleared another 40 acres of bottomland for pasture.

This past crop season, Warner worked 95 acres of cotton, 150 acres of corn, 33 acres of hay, 22 acres of silage corn, and 387 acres of pasture. In addition, he manages 160 dairy cows and 153 hogs. He also spent six months of last year on active Army duty.

In seven years, the quiet-mannered Future Farmer has used his love for farming, plus hard work, to build a net worth of over $50,000. And it all started from that old tractor and five young heifers. Shake his hand, drive out the lane, and take a bit of his perseverance with you through life.

These 14 distinguished men assembled in Kansas City to judge Warner Ross as Star Farmer of America. From left, front row: Rod Turnbull, Kansas City Star; James M. Roche, General Motors; Bruce Lourie, John Deere; Dr. Tenney, FFA Advisor; W. L. Henning, Pennsylvania secretary of agriculture; John C. Denton, Spencer Chemical Co.; J. W. Keener, B. F. Goodrich.

Standing: Raymond Firestone, Firestone Tire & Rubber Co.; Russell DeYoung, Goodyear Tire & Rubber Co.; Wallace Gordon, DuPont; Dr. Oliver Willham, Oklahoma State University; Merritt Hill, J. I. Case; Mark Keeler, International Harvester; Charles Shuman, American Farm Bureau.

FLYING FARMER with a future

THE STOCKY former Future Farmer who accepted the gavel in Seattle recently as president of the International Flying Farmer Teens is clearly more than an average college sophomore who likes to fly. Ed Butcher's leadership qualities prompted the 200 teen members of the International Flying Farmers to elect him their spokesman.

Ed's work at the family beef and grain ranch in the Missouri River breaks area of central Montana had necessitated his learning to fly the family plane. Checking the cattle over the rough terrain by saddle horse would have been time-consuming and trying on the individual as well. It was only natural then that he join this air-minded organization, which now has affiliated members in 40 states and Canada.

While attending teen meetings in nine of the states, Ed built up quite an interest in flying and the flying farmers' organization. In fact, before you read this, he will have attended the International Flying Farmers Workshop in Wichita, Kansas, and returned once again to his studies at Eastern Montana State College of Education in Billings.

Vo-ag has played an important part in Ed Butcher's achievement. At right with the family plane.

James Schultz, advisor to Ed when he was in vo-ag at Fergus County High School, spoke freely of the 19-year-old's record in FFA. "Ed won the chapter public speaking contest when he was a senior, then went on to place in the silver division at the state contest," Schultz told us in his correspondence. Ed's records show that he had amassed a total of $6,075 in beef cattle investments by his senior year and was placed high in the beef event at the Montana state convention.

Back home, Ed is building a registered beef herd and a full artificial breeding program in his spare time from college. "I plan to increase my herd to between 25 and 30 registered cows and then concentrate on raising the quality of cattle as high as possible," he recently told state officials in his application for Star State Beef Farmer.

With 10 hours of solo flying time under his belt and a student pilot's license in his wallet, Ed Butcher is fast becoming Montana's flying farmer with a future.

The Ayrshire

History of the Breed

PRIOR to 1800, native cattle in the rugged highlands of County Ayr, Scotland, had begun to develop certain fixed characteristics. Herdsmen, breeding for hardiness, good udders, and efficiency of production, as time went on developed a breed they named Ayrshire after the Scottish place of origin.

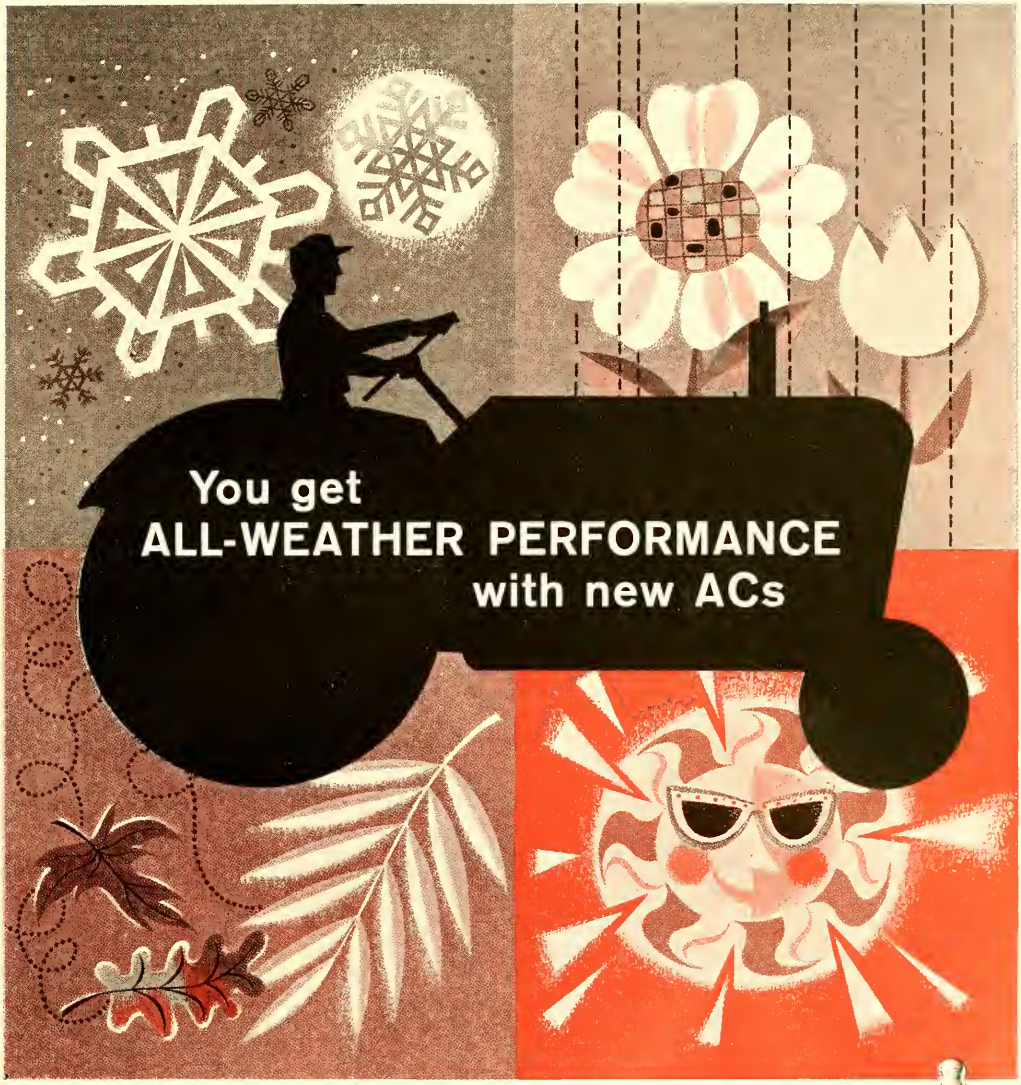
The first importation of these cattle into the United States is believed to have been in 1822, when a Connecticut farmer brought several to his dairy. Importations increased greatly after the American Civil War, when progressive Ayrshire breeders began registering their better cattle and calves.

Then in 1875, the purity of the Ayrshire breed was protected in the United States by the formation of the Ayrshire Breeders' Association. Fieldmen were secured and the country divided into four field extension areas.

Pushing westward and south from the North Atlantic states, Ayrshires expanded first to the central regions, then to almost every state in the union. Reliable sources estimate that there are now over 400,000 Ayrshire cattle in the country with nearly 150,000 of these registered. Their hardiness and repeated 4 percent milk helped popularize the red and white animals to this point. Many foreign countries now claim substantial numbers, in addition to Scotland and the United States.

The mature Ayrshire is distinctly colored with varying amounts of red and white. Average cows weigh between 1,150 and 1,200 pounds. Their inherited strong, straight legs and feet help keep them in the herd for as long as 15 years.

Over 500,000 females have been registered by the Ayrshire Association since it was organized back in 1875. More than half of these have been recorded since 1940, indicating the fast growth of the breed in recent years. National headquarters of the breed are located at Brandon, Vermont.



Winter, spring, summer, or fall—you can rely on new AC Farm Tractor Heavy-Duty Spark Plugs to help deliver quick starts, top economy and peak engine power. ACs are more reliable because their exclusive Hot Tip heats faster to burn away fouling deposits before they form . . . cools faster to reduce pre-ignition. What's more, rugged new Heavy-Duty ACs are the only spark plugs designed especially for farm tractors and implements. Get set now. Install new ACs for all-weather performance.

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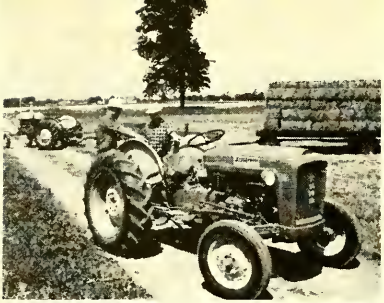
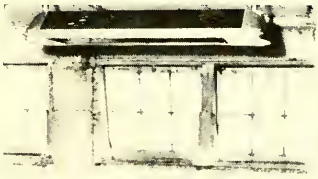


Besides switch to blue and gray, Ford offers buyers basic tractors with range of options. (Ford Implement Div., Birmingham, Michigan.)

Battery Pow'r-Guard saves batteries in cold weather by transmitting full output of generator directly to battery. (GorDag Industries, Minneapolis, Minn.)

something new



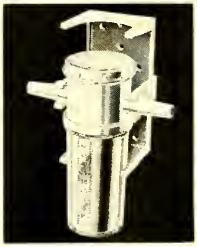
Reduced Christmas price on this 50-test soil kit. Tells what nutrients soil needs. (Sudbury Laboratory, Sudbury, Mass.)

New Infrared Heater protects calves and swine in cold buildings. (Utah Electronics Corp., Huntington, Indiana.)

Noreek manure deodorant controls odors from livestock. Concentrated. (E. M. Herr Dist., Lancaster, Pa.)

Pressurized air and kerosene give intense heat from this five-pound gun. Designed for thawing pipes, walks, as well as burning weeds. (Freeman Elec. Co., Freeman, Mo.)

Big 180-bushel capacity in this New Idea manure spreader with optional tandem axle for greater flotation. (New Idea Equip. Co., Coldwater, Ohio)



Handy plastic Milky Weigh milk meter is designed for pipeline systems. (Yandell Co., Fort Worth, Texas.)

Free for You!

THESE booklets are free! You can get a *single* copy of any or all of them by mailing the coupon below. Just check the booklets you want and send us your *complete address*.

1—Rubber—This is the story of one of the most essential—and most versatile—of the world's raw materials. It traces rubber from tree to tire. You'll find a lot of useful reading in this interesting booklet. It would make good theme material. It's all about rubber. (Firestone Tire and Rubber Co.)

2—The Turning of a Century—Where have we been and where are we going in agriculture? All this, and more, is answered for you in this vital report. It also gives a "look-see" at the agri-business of tomorrow. You will surely want a copy of this documentary of the agricultural revolution. (Chas. Pfizer and Co.)

3—Combining Corn-Cob Mix—Here are the details on a new way of harvesting corn. Written by an agricultural engineer from Iowa State, this book will give you ideas on handling, storing, and feeding your corn crop. Also it discusses high-moisture corn for livestock rations. (John Deere)

4—The Selection and Use of a Telescopic Sight—Want to really "zero-in" on game or when target shooting? This offering can help you select the right sight for your gun. Tells how to sight-in your scope and has a trajectory chart for different make guns. (W. R. Weaver Co.)

5—Can You Talk the Language of the Aerospace Age?—Every budding astronaut will want to have this glossary of space-age terms. It explains everything from *aerodynamics* to *zero gravity*. It will enable you to be in-the-know on the "lingo" of these modern times. (U. S. Air Force)

1 2 3 4 5

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From farrowing to marketing, specialists at Master Mix study exhaustively the effects of new farm management methods and feeding programs under actual feed lot conditions. Results are evaluated on the basis of their ability to help the Businessman in the Blue Denim Suit get the maximum return from his investment. The modern poultry and livestock farmer has learned that Master Mix research means more effective farm feeding and management: the proof is in his profit!

Central Soya
McMillen Feed Division
FORT WAYNE, INDIANA

"Here by the Owl"

Mr. Advisor:

"What is the most important consideration for a Future Farmer when he plans his supervised farming program as a freshman?"

Price Turner
FFA Advisor
Hahira, Georgia

THE FFA MOTTO, "Learning to Do; Doing to Learn; Earning to Live; Living to Serve," is directed to the most important phase of vo-ag—the supervised farming program, which may well mean the difference between success or failure to a vo-ag student.

As a Green Hand, one of the basic considerations in planning a supervised farming program may be the question, "Am I interested in farming as a career?" The answer may determine to a great extent how much time should be devoted to agriculture in high school.

If you are primarily interested in a basic course in agriculture and the gaining of some knowledge in solving agricultural problems, then you may be interested in only one or two years of agriculture.

On the other hand, if you can answer the question in the affirmative, then make an early start on a complete farming program, which will lead to the accumulation of livestock and equipment for farming after graduation. Each student must answer this question in the light of his own situation.

An early answer may be important. Errors at this stage may not be too serious, and your earning power is increased many times by the end of your high school career. A Green Hand should remember that the higher you aim, the farther you can shoot.

Many farm boys have had some experience with project work before entering high school. Through a good supervised farming program, these boys can find themselves gradually becoming established in a farming business through the accumulation of livestock, equipment, and land.

The FFA creed states it in this manner: "I believe in the future of farming . . ."

John T. Leyden
FFA Advisor
Scituate, Rhode Island

"BE SURE of what you want because you are going to get it." Let this be your motto when drawing up your farming program. You are the key figure in your supervised farming program. Always remember, the program will be as good as you want it to be.

A beginning Future Farmer must consider all factors of his program. Organization, in my opinion, is the first consideration to any successful supervised farming program. When you organize, you must be practical in your selection. Never become stagnant in ideas. Always have an open mind for new methods and suggestions. Practice and put the FFA Creed into action: "Better days through better ways." This program must be challenging and meaningful to you.

You can be sure that the program haphazardly thought up as to what, when, where, why, and how is doomed for ultimate failure. Answer these five organizational questions in relation to your program and to your complete satisfaction. Don't have illusions of grandeur that any answers are good enough. They aren't and you'll know soon enough if you don't organize your entire program.

Some of the facets of successful organization with your supervised farming program are annual and long-time objectives. Be specific and not general when you spell out these objectives. Let these goals or objectives be workable and attainable. Don't go overboard: be realistic.

Believe in what you are doing. Hard work and determination are essential in any worthwhile program. But all these are nothing without first organization.

Remember, you have the following resources working with you—your parents and advisor for encouragement and counsel, the FFA for leadership and incentive, and vocational agriculture for knowledge in what you are doing.

I believe the best solution is to organize your resources and then put them into action.

L. E. Watson
FFA Advisor
Humboldt, Nebraska

A FRESHMAN needs the most careful guidance when it becomes time to consider a supervised farming program. It must be made challenging enough that he will have the desire to develop it over the years.

He must see some good farming programs of older students. In this way he will get acquainted with the program and see quality livestock, crops, and farm improvement at its best. The challenge must be there.

The instructor must sit down with the Future Farmer and his parents and discuss the farming program. The parents need to know the answers as well as the student. Parents must help and inspire him to greater things.

A Future Farmer, along with his instructor, must see what will fit on his home farm. He should be led to see where improvements can be made and how he can help get the job done through his farming program over the years.

First of all, a freshman should start with quality in mind. The start is important. The size of his farming program is not so important. He will be able to enlarge his program as he goes along. It is better to do a good job on a program he can handle than to start too large. He and his family will be better satisfied with a job well done. In other words, a sound beginning makes for a successful future.

He must have understanding and encouragement. He must know the problems involved. The glimpse of the future should show the prospects for a bright picture. This will give encouragement. The new Future Farmer will come into high school with many questions in his mind. It is the job of the parents and instructors to help answer the questions and give encouragement for the future. If the parents' attitude is negative, the vo-ag student will have a hard time and may fall in the same line of thinking.

A Young Wheat Grower Reports—28-year-old Duane Havskjold, who farms 2000 acres in the high-premium wheat belt of Montana, was invited to preview the new John Deere "5010." He visited the John Deere Waterloo Tractor Works, tested the "5010" in the field, and gave this appraisal . . .

"I have no qualms about it slipping."

"We want a tractor that will travel 5 or 5-1/2 mph. This "5010" will."

"It's made to order for our country."

"That John Deere "5010" is mammoth . . . and it really moves!"

"Looks are half a tractor and this one *looks* big. Tires are mammoth . . . even the front tires are mammoth. That John Deere "5010" is mammoth . . . and it really moves. Traction is a big thing in my country. But the way the "5010" pulled, I have no qualms whatsoever about slippage. I estimate this "5010" will pull 26 feet of cultivator in our country quite easily. If it does it at the speed I think it will—5-1/2 or maybe even 6 mph—it'll be hard to beat. We want a tractor that will handle more acres per day. We want a tractor for summer fallow weed killing that'll handle a tool bar with big shovels at 5 or 5-1/2 mph. This "5010" will!"

The promise of better things the "5010" puts within the reach of wheat farmer Duane Havskjold is the same for big-acreage farmers across the nation. It's the promise that New Generation Tractors, in every power size, can fulfill on farms of every size. See your John Deere dealer for a free demonstration and for Credit Plan information.

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The FFA In

Across the U.S.A., Future Farmers are "Learning to Do; Doing to Learn; Earning to Live; and Living to Serve."

FFA Chapters Construct Exhibit Building at County Fairgrounds

The combined FFA chapters in Warren County, New Jersey, joined hands this past fair season to plan and build a new exhibit pole structure at the Warren County fairgrounds. Prime movers behind the only FFA building of its type in the state were the Belvidere and Hackettstown chapters.

Forced to look elsewhere for exhibit space due to crowded fair conditions, the two chapters asked the local FFA district for support. In a short time donations of money, materials, and labor came pouring in to build the 36- by 90-foot pole structure. Both cattle and FFA exhibits are housed inside.

Shortly after the 10 days it took to erect the building, State President John Wyckoff was congratulated by Allen Tomlinson, center, county superintendent of schools, and Ernest C. Smith, president of the Warren County Fair Association, right.

Faribault Chapter Sets Leadership Record With Three State Presidents

When Ron Gernandt was elected president of the Minnesota FFA Association, it marked the third time that his home chapter of Faribault had sent a state president to the convention. This set a record in Minnesota.

Keeping with the record, Paul Day, advisor of the national gold emblem chapter at Faribault, was elected president of the Minnesota Vocational Agricultural Instructors Association. You guessed it—this is the first time that both posts have been filled by representatives from the same school.

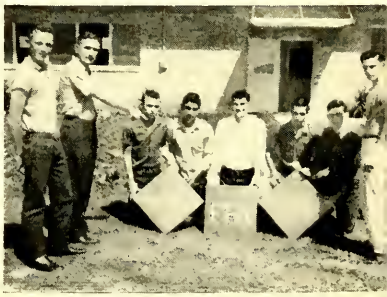
Ohio Future Farmer Named Nine-State Poultry Champion

Nine states sent applicants to the Northeastern Poultry Producers Council exposition this fall, but Darrell E. Thayer of the Arcanum FFA Chapter, Ohio, outlasted them all to become Star Poultry Farmer of the Northeast. He was presented his award by National FFA Vice President Randall McCutcheon, who has since retired from office.

The new Star Poultry Farmer has raised more than 2,000 of his own broilers for the past four years, as well as 3,500 turkeys. In addition to this group, he also manages 3,000 layers and 1,100 heavy breeding hens on the side. His award marks the second time in three years that an Ohio Future Farmer has won the honor at NEPPCO's exposition.

Texas Future Farmers Follow FFA Aims and Purposes Path to Vo-Ag Class

When confronted with the task of building a front walk to their new Raymondville, Texas, vo-ag building, chapter members decided to make the project a unique welcome to visitors. They designed and poured 16 square concrete slabs in the shop to make up the basic walk. Before 11 of the 18-inch square blocks dried,



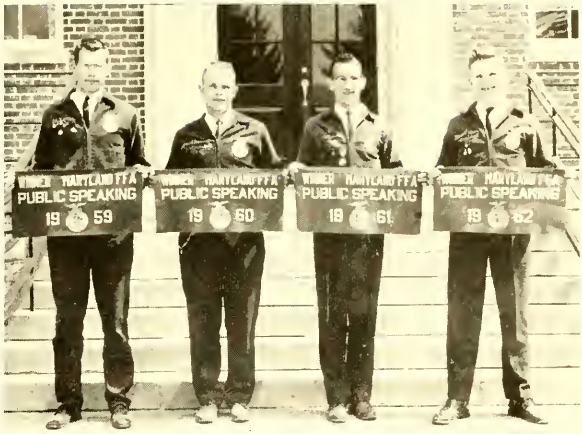
ACTION

Nebraska Chapter Takes Three State Championships

Pender Future Farmers this past school term brought home the third state championship in the past three years, and Advisor Joe Auel believes it may be a record. If not, it makes this Nebraska chapter still outstanding in leadership.

Three years ago, chapter members won the State Parliamentary Procedure Contest for the first time. Last year a demonstration on SPF swine took first honors in the State Farm Demonstration Contest, and another prize presentation in parliamentary procedure copped the 1962 state prize. In addition, Tom Frederickson walked away with the state public speaking title.

members pressed one word of the foundation into each one. Two others were imprinted with the words "FFA" and "Foundation," while the remaining three were left plain. After an initial drying period, the blocks were painted and then laid on a sand base.


WINNER MARYLAND FFA PUBLIC SPEAKING 19 59
WINNER MARYLAND FFA PUBLIC SPEAKING 19 60
WINNER MARYLAND FFA PUBLIC SPEAKING 19 61
WINNER MARYLAND FFA PUBLIC SPEAKING 19 62

Maryland Chapter Hard to Beat in Public Speaking Contests

Winning first place in FFA senior public speaking contests is getting to be a habit with members of the Williamsport, Maryland, Chapter. Holding banners they have won in the past four consecutive years are, left to right, Lee Downey; Frank Downey, his cousin; Kenneth Bowers; and Gerald Long.

All four went on to place second in regional FFA contests, while Lee, Frank, and Kenny each won first place in junior public speaking contests prior to gaining the above honors. Joseph K. Scott is the advisor of the top-placing chapter.

Safety Hint!

This distressed safety offender appears on a large safety sign recently erected by the Granton, Wisconsin, FFA Chapter as part of their annual safety program.

Under the direction of Advisor Francis Steiner, the Future Farmers have placed the novel sign along busy Highway 10, south of Granton. Thousands of tourists traveling through the northern U. S. can see the message as both a public service and a bit of advertisement for the Granton Chapter.

Colorado FFA Chapter Has Safe Driving Program

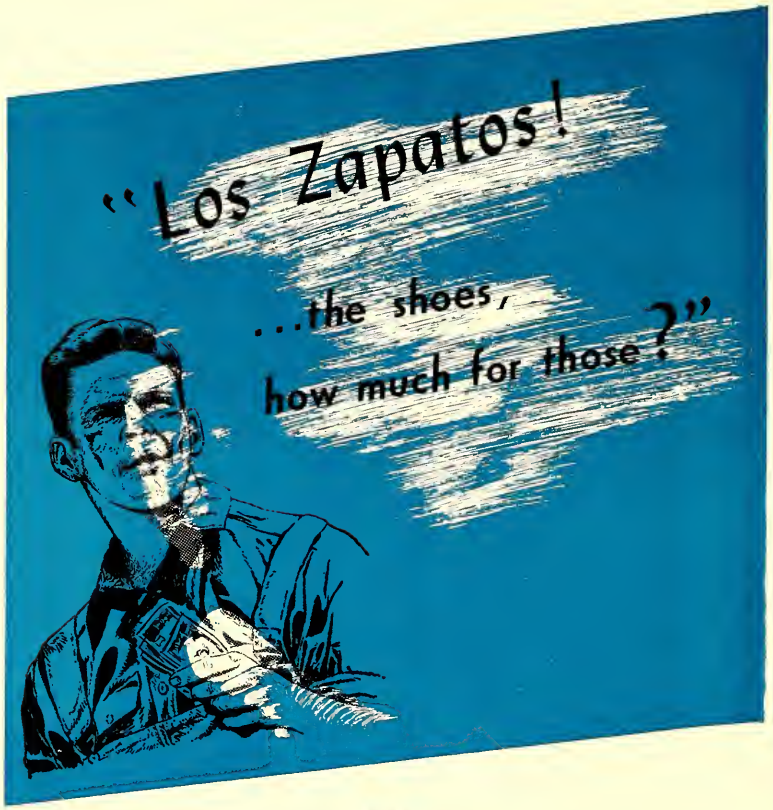
Hillrose Chapter in northeastern Colorado has added an annual safe driving award to its program of work. Each month for the past two years the chapter has elected a Student Driver of the Month. This driver is elected from the chapter's eligible drivers as the one showing the safest record for the month.

At the end of the year Hillrose Future Farmers meet to award a trophy to the student driver who has been elected Student Driver of the Month the most times. Chapter Reporter Paul Tramp reports a growing awareness of safe driving as a result of the program.

Vo-Ag Students Net Worth Greater Than Non-Vo-Ag Students

Every five years Audubon, Iowa, Vo-Ag Instructor Jim Hamilton takes out his pencil and paper and makes a survey of the net worth differences between farm boys who study vo-ag and those who don't. This year's totals showed surprising evidence in favor of the vo-ag course of study.

For the 12 farm boys studied who had taken vo-ag, their net worth averaged $3,074 at graduation. In contrast, seven boys who did not take vo-ag had an average net worth of $563 at graduation. This makes a difference of $2,511, while only five years ago it was $1,980. Advisor Hamilton uses these facts when making calls to prospective vo-ag students.



Fiction by G. M. Wilson

THE BATTLE between Jose's longing for store-bought shoes and his reluctance to spend any of the money he was saving to buy land caused my foreman to make me a small wager.

"He'll break down," Pete said. "I'll buy you a steak dinner if he doesn't go home wearin' those boots he keeps lookin' at."

I wasn't so sure. Jose Hernandez had a proud list to his chin that gave him a determined look, so I said, "You're on!" Jose came to the farm commissary and stood near my shoe counter, his eyes shining with unspoken desire. I would have gladly lost the wager just to see him own those boots.

It was Tony, an old friend of Jose's, who confirmed our suspicions that the only shoes Jose had ever owned were the homemade kind he was wearing now: crudely fashioned strips of old automobile tires tied with long pieces of rawhide. And, it was through Tony that we first learned of Jose's vision of being a landowner.

It was because of this dream that Jose had left his bride, Angelita, in Mexico, while he secured working papers and came to Rio Valle to pick cotton for 90 days to earn the needed money.

Unlike many of the other *braceros*, Jose did not spend his wages in town on Saturday night. At the commissary he bought only the food he needed. Every week he gave his money to me to purchase a cashier's check for Angelita, to be paid on the few acres of land he had chosen to own.

Even when there was frost on the cotton in the mornings, he did not replace the miserable thongs on his feet with the warm boots he admired, and so obviously needed.

"You're going to lose that bet," I told Pete.

Still, there was a time when I tried my best to persuade Jose to buy shoes.

It was on an unusually quiet Saturday evening, and I was getting ready to close the commissary when I saw Jose sitting on the bench near the stove, gazing at my shoe counter.

I went over, moved aside the stack of fancy baby shoes I'd let a fast-talking salesman persuade me to buy and took up the brown boots.

"All leather," I said, holding them out to Jose. "Nicely made, too—and real warm."

He took them, his fingers torn from the cold and the thorny cotton bolls, and I watched while the firm lines of his face softened and a smile touched his lips.

"Why don't you buy them, Jose? Angelita will be proud of you if you come home wearing these."

Slowly, he shook his head, put down the boots next to the baby shoes, and walked out into the night.

Then, one day in December, Jose gave me the money to buy a cashier's check for Angelita, which would make the last payment on his land.

When I shared this good news with Pete and Tony, Pete said, "Now, I'll bet he buys those shoes. In fact, I'll just make it two steak dinners." I nodded, not caring if I lost, and we both turned to Tony. He agreed with Pete, but with reservation. "*Si.* Perhaps Jose will buy the *zapatos* if the weather holds so he can pick the few days left on his contract."

(Continued on Page 38)

WHY IS SMITH-DOUGLASS FERTILIZER BETTER?

Take trace elements, for instance.

ZINC
CHLORINE
NITROGEN
HYDROGEN
OXYGEN
IRON
CARBON
MANGANESE
MOLYBDENUM
MAGNESIUM
PHOSPHORUS
BORON
CALCIUM
SULFUR
POTASSIUM
COPPER

With every bushel of grain and every head of livestock that leave the farm, not only are nitrogen, phosphate and potash removed, but secondary and trace elements are also removed.

Another reason for getting a thorough soil analysis is an increasing need for some of the trace elements. In the push for higher yields, trace elements are more likely to become a limiting factor. Land that has been cropped for many years without adding any trace elements is even more likely to show deficiencies in one or more of these elements.

There are 16 known essential nutrients needed for plant growth and reproduction. Of these, 13 must be supplied from the soil and 3 from air and water. Facilities for testing for all of these elements are not available, but it probably isn't necessary to find out if your soil has enough of each. You only need to be concerned with the ones in which soil in your area is likely to be deficient.

Smith-Douglass' exclusive trace element formula, TREL®, is added to every ton of Smith-Douglass premium fertilizer. TREL is an exclusive registered formula of the Smith-Douglass Company, containing all trace elements . . . and added only to Smith-Douglass fertilizer.

You never lose when you choose Smith-Douglass fertilizer . . . with TREL.

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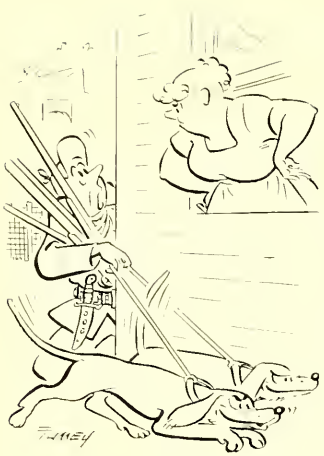
Smith-Douglass Co., Inc. manufactures and distributes fertilizers and chemicals for agricultural and industrial use, including sulphuric acid, anhydrous ammonia, phosphoric acid, nitrogenous tankage, phosphate rock, superphosphate, farm fertilizers, lawn and garden fertilizers, feed phosphorous supplements . . . dicalcium phosphate and defluorinated phosphate . . . potassium silicofluoride and potassium fluoborate.

SMITH-DOUGLASS FUTURE FARMER OF THE MONTH

Kendall Owen Clay
Willis Chapter
Hillsville, Virginia

Kendall is attending Virginia Polytechnic Institute with the assistance of a Smith-Douglass scholarship. He served as president of his FFA chapter, State FFA President, and plans to teach vocational agriculture and farm after graduation from college.



"Er . . . Just going to chase those rats out of the corncrib."

Los Zapatos!

(Continued from Page 36)

The next day, almost as if it were an omen of some kind, dark clouds moved in over the Organ Mountains and loomed high and threatening over the valley. We watched the sky anxiously and pushed the men at their picking. It was late that evening when they came to the commissary, too tired to do more than pick up a few items and drag themselves to the quarters. If Jose came in, I didn't see him. It was Tony who told me about the letter.

"It is too bad," Tony said. "A letter came today for Jose from his Angelita, and he does not know what it says to him."

I looked at Tony's distressed face. "Can't someone read it to him?"

The old man shook his head. "I cannot read, and Jose is too proud to ask anyone else."

"But it might contain an important message. Tell him that I will read his letter to him, Tony."

"No. But perhaps he will ask you himself."

I sighed. There was nothing I could do.

On the following day, the threatening storm held off while the men picked furiously, and those whose contracts were ending spoke of going home in anxious, excited voices. Jose, too, would be leaving the next day. But he did not speak of it that evening when he came in for a half-dozen eggs, nor did he ask me to read the letter. He had a preoccupied look, and for the first time since he'd come, he left the commissary without stopping by the shoe counter.

That night the storm broke. When morning came, the rain was turning to ice on the near-naked cotton stalks, and a cold wind blew steadily from across the desert.

When I had a fire going at the commissary, Jose came. He shivered beneath his threadbare jacket. The wretched shoes he wore had done nothing to protect his feet from the bitter cold, and he shifted from one to the other as he warmed at the heater.

For some reason it made me a little mad. Surely he would buy shoes today.

"Jose, on a day like this, you need those boots to keep your feet warm and dry." I put my hand on his shoulder. "How about it? You want to try them on?"

His eyes went to the shoes in the showcase, and he smiled. "If there is money enough."

It was Jose's last pay envelope that he emptied on the counter. I counted it while he looked on, and I named the amount in U.S. dollars and in Mexican *pesos*.

For a time he seemed to be considering, and then he grinned. He took the greatest part of the money, rolled it tightly, put it in a jacket pocket, and buttoned the flap. "For the bus," he said.

Then he spread out the money which remained. "Will this buy the *zapatos*?"

I didn't bother to count it. "It is exactly right," I said, "with this pair of socks thrown in!"

His grin widened. He sat on the bench, and while he untied the rawhide thongs and removed the rubber pieces from his feet, I brought out the boots in what I judged to be his size. When he had on the socks, I handed him a boot. "Try this."

His nostrils quivered as if he were afraid even yet to believe that he was about to own a real pair of shoes. When they were at last laced and tied, he sat quite still and stared at them for a long moment, and tears rolled heedlessly down his face. I wished that Tony were there to witness his friend's joy.

Then Jose took from his pocket a piece of paper, creased and soiled. "Please," he said, handing me Angelita's letter.

It was short. It said only that she was well, that Jose's family and her own family were all well, and that next summer Jose would be a papa.

When I finished it, Jose sat quite stunned, his face paling and flushing by turns.

"Well," I said, "this calls for a toast."

His face broke into a grin. "We will have a son," he said. "My Angelita and I."

I gave Jose a cup of hot coffee from the pot that bubbled on the heater, and he sat on the bench grinning a trifle foolishly, while he drank and gazed lovingly at his boots. The commissary suddenly seemed warm, and the sleet that blew in a steady tattoo against the windows didn't matter because Jose Hernandez had his land, his shoes, and a bonus from his Angelita.

Then, as I watched, his face and his eyes grew still; the grin shrank and slowly faded away. He set the half-empty cup on the floor and turned slowly toward the shoe counter.

"*Los zapatos*," he said, almost whispering, "the shoes for the *nino*. How much money for those?"

I quoted the price; it was very nearly as much as I'd taken for the brown boots he wore.

He looked at the shoes on his feet for a long moment, and then slowly he unlaced and removed them.

"I have changed my mind," he said. "I no longer wish to buy these. I want the small ones instead."

I started to protest, but Jose's chin lifted, and I did not speak. I handed him the little box that held a very small pair of shoes with little bells fastened to the laces. Jose raised the lid, and he touched one of the tiny shoes with the tip of his finger.

"My son," he said, "will wear shoes on his feet!"

Again the strange dignity of Jose Hernandez kept me silent while he tied the rubber and rawhide thongs to his feet again, tucked the baby shoes under his jacket, smiled, and went out.

I stood at the window and watched him go, and I wondered how I could have done differently so that Jose Hernandez would have gone home wearing warm shoes. But later, when I told Tony about it, he said wisely, "Do not worry about it. Jose will be a big man even without shoes."

I knew that he was right. So I went out and found Pete and collected my winnings.

◆◆◆

"Gesundheit!"

Oh what fun it is to ride

FROM $285

plus destination and setup charge

Fun to ride, fun to own *and fun to give* (or receive) – that's the thrifty HONDA "50". It's the perfect Christmas gift for him, for her, or for the whole family to enjoy! ■ There's never been anything like the HONDA – a light, lively, graceful vehicle that delights your eye, your love of fun and your sense of thrift. It's easier and safer to ride than a bike, breezes along at a whisper-quiet 45 mph *and gets up to 225 miles per gallon!* ■ There are 4 versatile models of the HONDA "50", all with HONDA's precision-built OHV 4-cycle engine. One comes with a push-button electric starter. Three models, including the agile TRAIL "50", come with automatic clutch and 3-speed transmission. The rugged, sporty Mark 110 model (pictured above) comes with hand-operated clutch, ram-injection carburetor, high-compression head and 4-speed transmission. And all "50"s come at a price that fits your Christmas budget! ■ No wonder the HONDA is the most talked-about, most wanted, most useful and most enjoyable traveling companion in America today. And no wonder that during this past year more than one million smart people have taken to two-wheel travel – to work, market, school and outdoor fun – on the HONDA "50"! ■ For your nearest HONDA dealer, call Western Union by number, ask for OPERATOR 25.

WIN A FREE HONDA "50"! Ten HONDA "50"s will be given as prizes in a drawing to be held Dec. 21, 1962. Nothing to buy, nothing to write, just register at your nearest HONDA dealer and complete and mail official entry card. All entries must be postmarked no later than Dec. 15. Winners will be drawn from all sections of the U.S., so anyone can win! If you win and have purchased a HONDA "50" between Nov. 1 and Dec. 15, 1962, your full purchase price will be refunded. Register now! This sweepstakes contest void in Florida, New Jersey, Wisconsin and wherever prohibited, taxed or restricted. Contest open to anyone 16 years of age or older living in the Continental United States, Alaska and Hawaii except employees and immediate families of American Honda Motor Co., its dealers, its advertising agencies and the Reuben H. Donnelley Corp.

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Plastic Bead Test for Milk

A new test using plastic beads to determine solids-not-fat in milk may soon help select dairy animals

Inventor Dr. N. S. Golding carefully checks the disposition of plastic beads in twelve milk samples in his laboratory.

By
Dr. N. S. Golding

COW'S MILK is composed of three major parts: water, butterfat, and solids-not-fat. The SNF is a grouping together of all the other constituents, chiefly protein, milk sugar, and ash.

Variations in these constituents occur from breed to breed and from cow to cow. Also, no cow will give uniform quality milk from day to day. Therefore, as with butterfat testing, the quality of a cow's milk must be evalulated over at least one lactation period. Sampling and testing monthly over the lactation period has proven to give a satisfactory value of the milk produced by a cow.

The Babcock Test, though no more accurate than several of the earlier methods, was sufficiently simple for cow testing. The older methods, though accurate, were too complicated and too slow to use. Most cow testers still use the Babcock fat test for the milk of individual cows. Any test added to the sampling, weighing, and fat testing must be simple and rapid if it is to be used on the dairy farm.

Density methods for determining the composition of liquids go back into the past. In early times a fresh egg had to float in the salt brine to have it strong enough to pickle meat or fish. Beads to float or sink at a definite density have been made for many years without much success. They cost too much to make of hollow glass, and other substances changed in density with time.

With the availability of plastics, the problem has been overcome. There are several advantages of using plastic beads. The selected plastic used can be a solid bead of the required density and of a type that expands the same as milk. Thus, the close temperature control with glass beads is unnecessary. Also, by molding methods it is suited for mass production at a greatly reduced cost.

The apparatus consists of a four-gram screw-top sample jar containing 10 beads, the density of which varies in equal steps to cover the range in density of almost all natural milk. The beads are designated by differences in color and are retained in the jar by a plastic grid through which a Babcock pipette or thermometer can be inserted.

The test consists of adding to this clean, dry jar about one inch of well-mixed milk to be tested. Cool the milk to about 68 degrees, mix by a rotary motion, and place the jar on a glass shelf.

Allow two or three minutes for the beads of a greater density than the milk to sink, and then by means of a mirror below the shelf, record the number of beads sunk. Check the number of beads on top of the milk. The total should add up to 10, although occasionally one bead at the exact density of the milk will remain in the middle. In this case, remix and allow time for the beads to settle. Always read the number of beads sunk. Usually 12 samples at one time.

The SNF increase the density of milk while fat reduces it. Therefore, formulas for the percentage of SNF must include both the percentage of fat and the density, usually expressed as the number of beads sunk. Formulas and tables for the percent SNF in milk have been prepared from previous analyses of many samples of milk.

The market has changed and the consumers are looking for a milk high in the percentage of SNF rather than the old deep cream line of high-fat milk. Also, taste tests have shown that people prefer a high SNF milk, even when the percentage of fat is relatively low. Nutritionally, a lower fat milk is considered more desirable.

Most of the dairy products made from milk, with the exception of butter, use the SNF. The yield per 100 pounds of milk depends more on the percent SNF than the percent fat.

Testing cow's milk only for fat and pounds of milk over the last half century has given information by which high-fat-testing cows and high producers have been selected for breeding.

As a general rule, the high-fat-testing breeds produce milk high in SNF. Thus, the above approach at first appears good. On the other hand, where only extensive testing of cow's milk for percent fat and yield were used over a long period of time for selection of breeding stock, the percent of fat in the milk has improved while the average percent of SNF has gone down.

Research workers have shown that the inheritance of the percent of fat in the milk and the percent of SNF are separate factors. Therefore, without knowing both factors of the individual cow's milk in a herd, intelligent selection of the dairy cattle for breeding is almost impossible.

Much research work has shown that mastitic milk is low in the percent of SNF. Where low SNF is recorded, other available tests for mastitis should be used.

Already many dairymen in Washington and a few other states have begun using plastic bead hydrometers. At present, the work is largely done by DHIA testers who record the number of beads sunk, then calculate the SNF and percentage of fat on computers back at their headquarters.

The dairyman who selects his breeding stock from high-producing cows which have been tested regularly for both fat and SNF will gradually raise both the percentage of fat and the percentage of SNF in his herd. ◆◆◆

FARM FIRE SAFETY

THE BEST PROTECTION IS CAREFUL INSPECTION

DON'T TRUST TO LUCK! OVER 100 MILLIONS OF DOLLARS IN PROPERTY LOSSES WERE SUFFERED BY FARMERS LAST YEAR DUE MOSTLY TO CARELESSNESS! AT LEAST ONCE A YEAR CHECK YOUR FARM FOR THESE DANGEROUS FIRE HAZARDS...

IN THE HOUSE...

CHECK HEATING SYSTEMS FOR DEFECTIVE FLUES, PROPER VENTILATION, LEAKS IN FUEL TANKS.

HEATERS SET ON NON-COMBUSTIBLE BASES, AWAY FROM WALLS, IN GOOD WORKING ORDER.

CLEAN UP TRASH FROM BASEMENT, STORE ROOMS AND ATTICS.

CHECK ALL WIRING FOR WEAR...CHECK OUTLETS AND FUSE BOX FOR OVERLOADING.

CHECK CHIMNEY FOR DEFECTS OR CRACKS...ROOF FOR LOOSE SHINGLES.

BARNS and OUTBUILDINGS

CHECK LIGHTNING RODS—PARTICULARLY CORROSION NEAR GROUND.

CHECK STORAGE OF FLAMMABLE LIQUIDS—SMALL AMOUNTS IN WELL-DETACHED, FIRE-RESISTANT SHEDS...

LARGE TANKS UNDERGROUND OR, IF ABOVE, 75 FEET FROM BUILDINGS.

SAFETY CANS FOR CARRYING GASOLINE.

CHECK FOR DEFICIENT WIRING.

CHECK ELECTRIC MOTORS FOR ACCUMULATED DUST AND GREASE.

SEE THAT MOTOR VEHICLES ARE STORED IN SEPARATE SHEDS, NEVER IN BARN.

POST NO-SMOKING SIGNS AND SEE THAT THEY ARE OBEYED.

HAY LOFTS SHOULD BE WELL-VENTILATED. NEVER STORE WET HAY!

HAVE HAY AND GRAIN DRYERS CHECKED BY AN ELECTRICIAN.

CHECK BROODING EQUIPMENT. INFRA-RED LIGHTS COVERED BY WIRE SCREEN.

CORN SHELLERS, ETC., POWERED BY BELTS FROM TRACTORS, SHOULD BE PROPERLY GROUNDED.

CHECK ALL TYPES OF EXTINGUISHERS FOR READINESS EVERY MONTH.

BE SURE ALL ELECTRICAL DEVICES HAVE THE UNDERWRITERS' LABORATORIES SEAL OF APPROVAL.

EMERGENCY FIRE FIGHTING EQUIPMENT

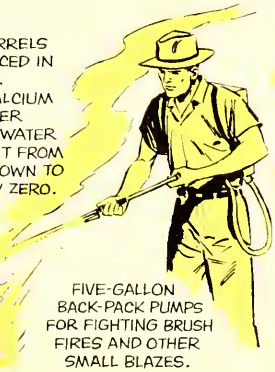
THAT SHOULD BE KEPT READY FOR USE ON EVERY FARM

A GARDEN HOSE CONNECTED TO WATER UNDER PRESSURE...

A LADDER FOR ROOF FIRES AND FOR RESCUES.

FILLED WATER BARRELS AND BUCKETS PLACED IN HANDY LOCATIONS.

5 LBS. OF CALCIUM CHLORIDE PER GALLON OF WATER WILL KEEP IT FROM FREEZING DOWN TO 53°F BELOW ZERO.



FIVE-GALLON BACK-PACK PUMPS FOR FIGHTING BRUSH FIRES AND OTHER SMALL BLAZES.

LACK OF WATER IS THE MOST SERIOUS DANGER WHEN FIRE STRIKES. AN EMERGENCY SUPPLY OF MORE THAN 300 GALLONS IS A *MUST*

A LARGER FARM POND PROVIDES THE BEST SOURCE OF WATER *PLUS RECREATION (SWIMMING AND FISHING).*

THE STORY OF

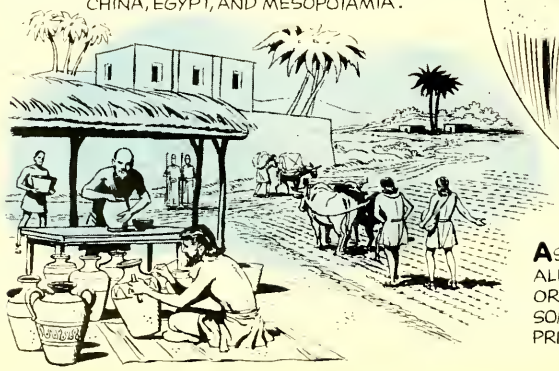
FARMING

No.1 The Dawn of Culture

BEFORE THE DAYS OF RECORDED HISTORY, PRIMITIVE MAN DEPENDED ENTIRELY ON WILD ANIMALS AND PLANTS FOR FOOD AND CLOTHING. WHEN THE ANIMALS DISAPPEARED FROM HIS USUAL HUNTING GROUNDS, OR THE PLANTS FAILED TO GROW, HE WAS FORCED TO WANDER IN SEARCH OF THEM. HE COULD NOT ESTABLISH A PERMANENT HOME.

THEN, SOMETIME IN THE DIM PAST, MAN DISCOVERED THAT HE COULD DOMESTICATE SOME ANIMALS FOR A MORE CERTAIN SOURCE OF FOOD AND CLOTHING. BUT HE WAS STILL FORCED TO WANDER. FOR NOW HE MUST DRIVE HIS HERDS IN SEARCH OF GOOD PASTURE.

HOW OR WHEN MAN FOUND THAT SOME PLANTS WERE BETTER FOR FOOD THAN OTHERS AND THAT THEY COULD BE GROWN FROM SEED IF HE SCRATCHED THE GROUND AND PLANTED THEM, NO ONE KNOWS, BUT IT WAS A DISCOVERY THAT WOULD CHANGE THE WORLD. NOW, MAN COULD SETTLE IN A MORE OR LESS PERMANENT PLACE WITH A FAIRLY DEPENDABLE SUPPLY OF LIVING NECESSITIES. THE FIRST VILLAGES SPRANG UP IN CHINA, EGYPT, AND MESOPOTAMIA.



AS MAN'S KNOWLEDGE OF FARMING GREW, NOT ALL OF THE PEOPLE WERE NEEDED TO GROW CROPS OR TEND LIVESTOCK. SOME HAD TIME TO TRADE, SOME TO DEVELOP THE ARTS, SOME BECAME PRIESTS OR SOLDIERS. *THE DAWN OF CULTURE HAD ARRIVED!*

FARM CHEMURGIC

CHEMISTRY AT WORK ON THE FARM

IN 1935 A GROUP OF INDUSTRIALISTS, SCIENTISTS AND AGRICULTURISTS GOT TOGETHER TO DISCUSS THE PROBLEM OF THE ENORMOUS CROP SURPLUSES THAT WERE RUINING THE FARMERS' MARKET.

THEIR AIM WAS THREEFOLD: TO DISCOVER NEW USES FOR ESTABLISHED FARM CROPS...TO DEVELOP NEW CROPS FOR ACREAGE DEVOTED TO SURPLUS CROPS...TO MAKE MORE PROFITABLE USE OF FARM WASTES, OR FARM RESIDUES.

THUS THE **NATIONAL FARM CHEMURGIC** COUNCIL WAS FORMED AT DEARBORN, MICHIGAN, *(LATER CALLED THE COUNCIL FOR AGRICULTURAL AND CHEMURGIC RESEARCH)*.

WITH FEDERAL HELP FOUR LABORATORIES WERE ESTABLISHED...AT PEORIA, ILL., NEW ORLEANS, LA., ALBANY, CALIF., AND PHILADELPHIA, PA. FOUR HUNDRED SCIENTISTS AND AUXILLARY WORKERS WERE RECRUITED FOR EACH.

THIS RESEARCH IN CO-OPERATION WITH INDUSTRIAL AND OTHER ORGANIZATIONS HAS BROUGHT VAST NEW WEALTH AND BENEFITS TO FARMS, INDUSTRY, NATIONAL DEFENSE AND CONSUMERS. HERE ARE SOME OF THE HUNDREDS OF NEW PRODUCTS RESULTING FROM CHEMURGIC RESEARCH...

PENICILLIN • ANTIBIOTICS • DEXTRAN A BLOOD PLASMA EXTENDER • **DRUGS RUTIN** and **QUERCETIN • SURGICAL SPONGE** from **STARCH • ELASTIC BANDAGE** from **COTTON • VITAMINS • FIBRES** from **CORN, PEANUTS** and **MILK • DRIED-EGG PRODUCTS • CHEMICAL FIBRES** from **COTTON • IMPROVED WOOD PRODUCTS • SYNTHETIC RUBBER • SYNTHETIC LUBRICANTS • FROZEN CITRUS CONCENTRATES • APPLE SYRUP** as a humectant for tobacco • **DETERGENTS • NEW COATINGS** from **VEGETABLE OILS** and **PINE GUM • ANTIOXIDANTS • WAX** from **SUGAR CANE • PAPER BOARDS • ETC.**

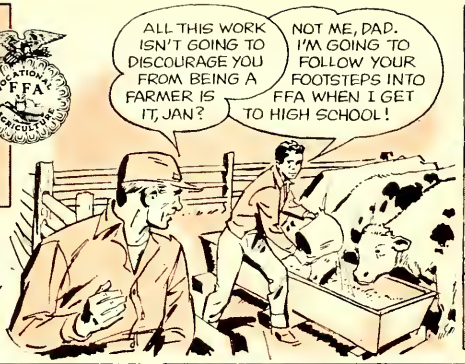
THE LIST OF NEW PRODUCTS GOES ON AND ON...

FARM CHEMURGIC, ALREADY SUCCESSFUL WILL CONTINUE TO AID AGRICUTURE AND IMPROVE THE WORLD'S LIVING STANDARDS. BASED ON THE USE OF ANNUALLY RENEWABLE RAW MATERIALS IT ALSO ENABLES NATIONS TO CONSERVE THEIR OTHER RESOURCES.

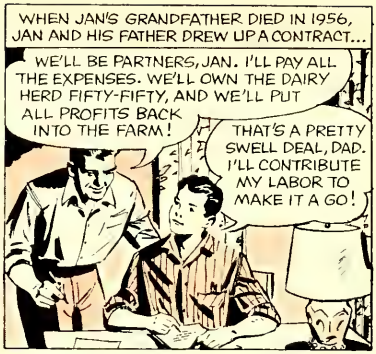
A TRUE STORY OF FFA

by AL STENZEL

JAN TURNER WAS THE ONLY BOY IN A FAMILY OF FIVE WHICH MEANT HE HAD PLENTY OF CHORES TO DO ON HIS FATHER'S FARM AT MORGAN, UTAH...


ALL THIS WORK ISN'T GOING TO DISCOURAGE YOU FROM BEING A FARMER IS IT, JAN?
NOT ME, DAD. I'M GOING TO FOLLOW YOUR FOOTSTEPS INTO FFA WHEN I GET TO HIGH SCHOOL!

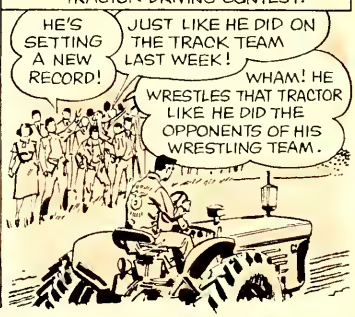
WHEN JAN'S GRANDFATHER DIED IN 1956, JAN AND HIS FATHER DREW UP A CONTRACT...


WE'LL BE PARTNERS, JAN. I'LL PAY ALL THE EXPENSES. WE'LL OWN THE DAIRY HERD FIFTY-FIFTY, AND WE'LL PUT ALL PROFITS BACK INTO THE FARM!
THAT'S A PRETTY SWELL DEAL, DAD. I'LL CONTRIBUTE MY LABOR TO MAKE IT A GO!

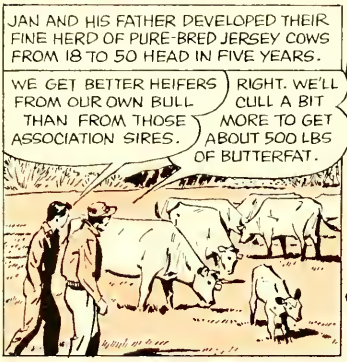
WHEN JAN ENTERED VO-AG AT MORGAN HIGH SCHOOL IN 1958 HE IMMEDIATELY BECAME ACTIVE IN THE FFA PROGRAM.

JAN IS AN EXCELLENT PUBLIC SPEAKER. HE WON MANY ORATORICAL AWARDS BOTH IN FFA AND OTHER SCHOOL AND CHURCH ORGANIZATIONS.

AS A JUNIOR HE WON THE CHAPTER TRACTOR DRIVING CONTEST.

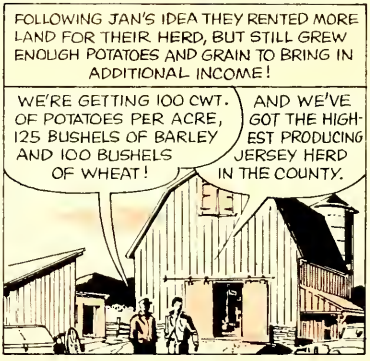

HE'S SETTING A NEW RECORD!
JUST LIKE HE DID ON THE TRACK TEAM LAST WEEK!
WHAM! HE WRESTLES THAT TRACTOR LIKE HE DID THE OPPONENTS OF HIS WRESTLING TEAM.

JAN AND HIS FATHER DEVELOPED THEIR FINE HERD OF PURE-BRED JERSEY COWS FROM 18 TO 50 HEAD IN FIVE YEARS.

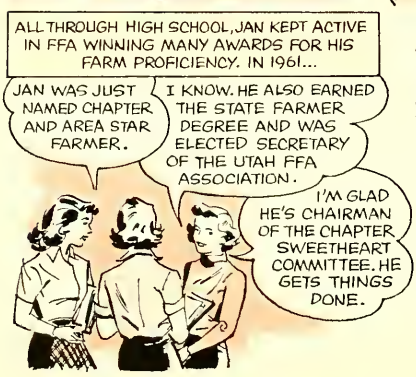

WE GET BETTER HEIFERS FROM OUR OWN BULL THAN FROM THOSE ASSOCIATION SIRES.
RIGHT. WE'LL CULL A BIT MORE TO GET ABOUT 500 LBS OF BUTTERFAT.

WE NEED MORE ROOM. MORGAN CITY'S GROWING RIGHT UP TO OUR DOORSTEP!
MAYBE WE OUGHT TO CUT DOWN OUR VEGETABLE ACREAGE AND SPECIALIZE IN THE DAIRYING FIELD.

FOLLOWING JAN'S IDEA THEY RENTED MORE LAND FOR THEIR HERD, BUT STILL GREW ENOUGH POTATOES AND GRAIN TO BRING IN ADDITIONAL INCOME!


WE'RE GETTING 100 CWT. OF POTATOES PER ACRE, 125 BUSHELS OF BARLEY AND 100 BUSHELS OF WHEAT!
AND WE'VE GOT THE HIGHEST PRODUCING JERSEY HERD IN THE COUNTY.

ALL THROUGH HIGH SCHOOL, JAN KEPT ACTIVE IN FFA WINNING MANY AWARDS FOR HIS FARM PROFICIENCY. IN 1961...


JAN WAS JUST NAMED CHAPTER AND AREA STAR FARMER.
I KNOW. HE ALSO EARNED THE STATE FARMER DEGREE AND WAS ELECTED SECRETARY OF THE UTAH FFA ASSOCIATION.
I'M GLAD HE'S CHAIRMAN OF THE CHAPTER SWEETHEART COMMITTEE. HE GETS THINGS DONE.

BY GRADUATION TIME IN MAY, 1962, JAN'S SHARE OF HIS FARM'S INCOME WAS WELL OVER $10,000— HIS NET WORTH NEARLY $24,000. SPACE DOESN'T PERMIT THE LISTING OF ALL HIS ACCOMPLISHMENTS AND AWARDS WON DURING HIS SCHOOL YEARS. HE HELD IMPORTANT POSTS IN HIS CHAPTER AND STATE FFA... IN HIS SENIOR YEAR HE AGAIN WON THE STATE DAIRY FOUNDATION AWARD AND WAS NAMED AREA STAR FARMER, FOR THE 2ND CONSECUTIVE YEAR.

FOR HIS OUTSTANDING RECORD AS A STUDENT OF VOCATIONAL AGRICULTURE, 18-YEAR OLD **JAN TURNER** WAS NAMED **1962 STAR DAIRY FARMER** BY THE **FUTURE FARMERS OF AMERICA.**

JAN IS A MEMBER OF THE MORGAN FFA CHAPTER, MORGAN, UTAH

By
Margaret Jensen

Shivering cold... wet and uncomfortable... BUT having fun...

Duck Hunting

IT'S A DISMAL day with a cold north wind and occasional drizzle threatening to turn to snow. But that's the day a strange group of men—young and old—emerge as if by signal all over the country. Duck hunters!

The rest of the year they enjoy their creature comforts. But come that first dismal day in late fall after the waterfowl season has opened, they appear like Dr. Jekyll-Mr. Hyde characters. Long before daylight they arise, don layers of loose-fitting wool clothes, and plow through mud and snow to hide in boats, blinds, and brush in marshes, fields, and along river banks and streams. Some two million hunters, spending an average of $50 each for the hunting season, are out every fall, shotgun in hand, hoping to bag a few birds.

These beautiful little waterfowl can fly deceptively fast, often fooling the most experienced hunter. At speeds of 50, 60, even an almost unbelievable 70 miles an hour, they can quickly streak out of shotgun range.

There are several methods for hunting ducks depending on the species, the land, weather, and the hunter himself. Some do "pothole shooting," just lying in wait, no decoys, or trying to pull a sneak. Others enjoy "jump shooting" as the ducks rise (or jump) when surprised by the hunter. Pass shooting probably takes the most skill—trying for birds as they fly by on their way from water to fields and back again. This method can be real sport in bad weather, for the ducks keep moving all day in small groups.

Sixteen mallard decoys downwind from the blind helped draw in this hapless duck.

Undoubtedly, decoy shooting is the most popular method. The kind of decoys depends on the species in the locale, but mallard decoys will lure most kinds of duck that frequent a place where mallards are normally found. Large open bodies of water may require several dozen decoys. For puddle ducks on small shallow water, a dozen or two may be enough.

They should be placed downwind from the blind and so the ducks can get to them easily when flying upwind. Are these modern "gun-store" decoys realistic? Ask the fellows who have sat spellbound while a big greenhead sidled up to one and held a long quacking conversation.

A blind is useful, almost a necessity. They range from some brush or weeds tied on like a cover-all or a pit covered with weeds to a comfortable permanent structure. It must blend with the surroundings with nothing exposed that doesn't belong there naturally. Wear clothing that is inconspicuous. Then keep quiet and motionless. Ducks have very sharp eyes.

The choice of a gun is a personal thing, but for the majority the 12-gauge seems to be the answer. Range of a 20-gauge is about 10 yards shorter than the 12. That's argument enough for most hunters. No. 6 shot seems to be best all around. No. 4 does have the edge in wind and rain because of the heavier, tighter pattern, particularly for shots at ranges of more than 40 yards. The new magnum loads with more lead and powder are popular with duck hunters and leave less injured game. As for the choke, though many will insist

(Continued on Page 46)

Duck Hunting

(Continued from Page 45)

on a full, modified is probably best in most cases.

There are those hunters with the most expensive gun, hunting togs, boat, retrievers, and even a heated blind that insures comfort in the worst weather. Others prefer just a gun and a pocket full of shells. Their blind may be just a camouflage of mud smeared from head to toe and topped with a weed hat. In snow they may lie under an old bed sheet.

There are a few common mistakes that beginners especially can watch for. There's a tendency to shoot at birds that are out of range. Most hunters experienced in the field won't try beyond 40 yards. However, it is difficult to judge the distance. There's also a tendency to shoot too soon. When they're coming in to decoys, the best time to "let 'em have it" is just as they "let the flaps down." Ducks need a direct hit, for they're fast and tough and shielded surprisingly by their heavy layer of feathers.

One of the most common mistakes is not leading enough. It is not unusual to try for the duck in the lead and see one fall from far back in the flight. Pick one bird, swing on his line of flight. Just as you pass in front of him, squeeze.

But don't stop when you squeeze! As with a tennis racket or a golf club, follow through with your swing, pivoting on the knee or foot. Shotgun shooting is not like rifle shooting. With a rifle you aim and shoot. With a shotgun you point and swing. Practicing with clay targets thrown from hand-traps can be a big help.

"I wish he could point the way home—we're lost!"

Part of the hunt, of course, is taking care of the precious birds that are bagged. It's best to draw them in the field, especially if the weather is warm or the birds are shot up badly. For good flavor they should be plucked and then hung by the neck in a cool, dry place for a couple of days. Or they can be skinned, cleaned well, wiped dry, and refrigerated.

Duck hunting now is far from what it was in the "good old days" when their numbers seemed unlimited. Federal regulations governing hunting vary in each flyway, determined by such things as the number of birds and probable hunters and the number of each species. Within these federal regulations the states have several options, such as the split season.

In 1961 and '62 there was a nation-wide closed season on canvasbacks and redheads because their numbers have been so low. Mallard hunting has been sharply curtailed, since the population has been reduced by the droughts in recent years, which affected their prairie nesting potholes. Scoups were unaffected since they don't nest on the prairies. The regulations are aimed at protecting these beautiful birds so that each spring they can go north to their nesting grounds, following the flyways of their ancestors. Again each fall they can call out greetings from their skyways on their return to warmer climates. ◆◆◆

Ice Free Water

(Continued from Page 23)

It is neither necessary nor profitable to warm water much above 35 degrees for livestock. In a combination watering unit, each bowl should have its own heating element and thermostat. The heating element should be sealed from moisture and should operate on 115 to 120 volts. It should also be wired with three-wire cable so that it is electrically grounded.

Waterer Installation

Electric livestock waterers may be located in the open or in a building, since there is no flame or fumes to make a fire hazard. In selecting the location, consider:

1. Number of animals using waterer (25 to 50 head per foot of trough).
2. Drainage area around waterer.
3. Wind protection.
4. Easy cleaning of the area.
5. Source of water and electricity.

A good location should leave enough room around the waterer for both animals and cleaning equipment. A minimum of a half circle should be allowed. A waterer located 20 feet from buildings and fences provides adequate room for animals to move completely around it. One placed along side a building or in a fence line should be placed at least 20 feet from any corner. Avoid corners where animals may crowd; maternity or sick pens are the exceptions.

Safe, Economical Wiring

Proper wiring is absolutely necessary to protect livestock and people from electrical shock. The waterer and switch box must both be grounded. The waterer should be grounded to the switch box ground as well as to a separate ground. Plastic pipe will not serve as part of the grounding system. Underground wire should be buried at least two feet. It can be placed in the same trench with the water pipe.

Keeping Costs Low

Operation costs will vary depending upon the size and type of unit, number of animals using it, and its location. Remember these ways to keep operation costs down:

1. Locate the waterer so that it has wind protection.
2. Provide a riser tile six feet in length.
3. Provide covers on waterers for swine.
4. Select the proper size and number of units for your livestock. ◆◆◆

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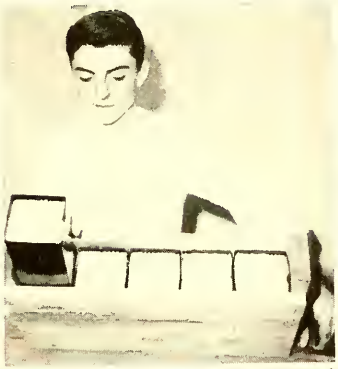
By Keith Kirkbride

APARTMENT For BEES

The bee unit is placed on a post facing northeast with straws horizontal.



Here's a close-up! Two-quart painted milk cartons with 500 straws in paraffin.

BEE APARTMENTS are being used to get leaf-cutter bees to stay in the rich Columbia Basin in the state of Washington, where they'll do their efficient pollination work in alfalfa fields. These artificial nesting sites may become important in the production of seed alfalfa that has become such an important agricultural industry in the area.

What makes the leaf-cutter bee so much in demand? These small sand bees are much tougher than their honeybee and bumblebee cousins. Therefore, they disregard the sharp rap of the alfalfa blossom trip mechanism that turns back larger bees before the blossom is completely pollinated.

It is for this reason that members of the Quincy, Washington, Chapter have become interested in developing an agricultural practice that would increase the leaf-cutter bee population. The bee apartment project started because of local requests from seed producers for better housing for the leaf-cutter bee. The bee lives in small holes and cracks provided by nature, or he'll use holes bored into timbers, laminated boards, or milk straws for nesting sites.

Bee apartments are made by using one- or two-quart milk cartons which are lined with plastic or painted to restrict light in the cells. About one inch of melted paraffin is poured into the carton, and then the 3/16-inch drinking straws 6½ inches long are poked into the paraffin. This provides stability to the apartment by holding the straws rigidly in place. The two-quart container will hold about 500 straws.

The Chapter members devised a special wooden box which will hold several of the prepared cartons. The unit is easy to handle and is placed on a post or on outbuildings in a semiprotected area, facing north or east, with the holes in a horizontal position. The containers also cause the leaf-cutter bees to congregate into one group. They stay within a single colony until all the available holes have been filled with eggs and until each hole is capped with a plug of alfalfa leaves.

Members of the Quincy Chapter have filled orders for more than 1,000 cartons. Interested members would check out straws, wax, and cartons to be filled at home. Very little school time was used except for demonstrations and instructions. The finished product sold for $6 per apartment unit of 2,500 straws. The apartment unit is made up of five half-gallon cartons or 10 one-quart cartons. The members filling the cartons had an opportunity to make some money, the Chapter had an income, and the farmers in the area were happy to find a method to collect the valuable leaf-cutter bees.

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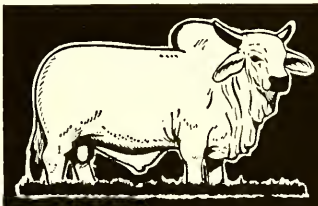

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National Plowing Champion

Former Michigan Future Farmer, Leroy Losey, is the third national winner coached by his father Hugh Losey.

"LET'S GO home, Dad. I've got 30 acres of wheat to get in!" With that the father-son team of Hugh and Leroy Losey walked away from the half-acre tract of Ohio soil, where minutes before Leroy had won the National Level Land Plowing Contest.

When spectators heard that this 20-year-old former Future Farmer was from Springport, Michigan, it was no surprise. Nor was it a surprise to anyone but Leroy that he had won in his first try for national plowing honors. For his small southcentral Michigan hometown has been the home of three national plowing champions since 1958, and each winner has been coached by Leroy's father, Hugh Losey, local FFA leader and implement dealer.

It was in vo-ag at Springport High School that Leroy developed his desire for personal perfection. "He is careful and thorough in everything he does," his advisor, Glen Nesman, explained. "It has to be just right before he will go in."

"I started out in 1955 and won the junior division in the county plowing contest for two years. Then I won the plowing safety award and finally the county senior division," Leroy recalls. This past August, with the encouragement of his father, he entered the Michigan state finals and won hands down. In the meantime, he got his State Farmer Degree from the Michigan FFA Association.

Leroy and his dad carefully clean the plow used to turn the winning furrows.

Leroy, who used a 14-inch, three-bottom plow for the national contest, has these tips to offer other Future Farmers who aspire to plow the straight and narrow furrow:

"Once you have your back furrows, you have to control the plow more than the tractor," he says. "I had regular equipment but made the plow over by drilling a few holes in it so I could adjust it better.

"I had No. 9 wire dangling back from the colter posts so that it dragged back 10 to 12 feet under the furrow. It may look unprofessional, but it sure covers the trash!" he added.

Some mathematics enters into professional plowing, too. Leroy had to figure his center stakes so that his last furrow would come out just right with as good coverage as the first one. These pointers coupled with a desire for perfection from practice are Leroy's answers for better plowing.

Such areas as furrow straightness, furrow condition and uniformity, trash covering, and the quality of the tilled surface were judged at the contest. Even with a penalty for going overtime, Leroy chalked up 81.3 points out of a possible 100 to defeat the second-place Ohio entry by four points.

Early next year he will carry the United States title to Canada to try for the world championship. If he brings the gold plow trophy back to Springport, he will be the youngest winner in the history of the contest.

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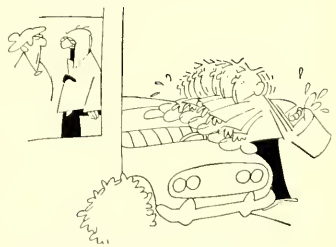

"I told him the car was too dirty to take to the prom."

"The Flying Dutchman"

Sportrait

By Stan Allen

Steve Van Buren

ONE OF professional football's greatest ball carriers could not make his high school team as a 15-year-old. Steve Van Buren, the Flying Dutchman of the Philadelphia Eagles, was too small then, but he stayed with it to become one of the best halfbacks in football history.

Van Buren played his first football as a junior for Easton High School in New Orleans and played well enough to earn a scholarship to Louisiana State University. He ran from the blocking back spot in his first two years in the LSU backfield. Steve took advantage of an opportunity to carry the ball in his last two years and became an offensive star of the Southeastern Conference, setting many conference marks.

Van Buren was the Eagles' No. 1 draft choice in 1944 and got off to a fine start in pro ball. An operation kept him out of action for part of that season, but he did score five touchdowns while gaining 444 yards for a fine 5.5-yard average per carry. In his sophomore season in '45 Van Buren went into high gear, scoring 18 touchdowns for a national football record that has never been beaten. He even kicked two points after touchdown for a total of 110 points that tied him for the No. 6 spot on the all-time single season list at that time.

Van Buren could run the 100 in 9.8 seconds and was a fast and elusive broken field runner. As a 6-foot 1-inch, 200-pound fullback, he had the power to run over the defense when boxed in. He was also a good punter, a fine tackler, and one of the best blocking backs on the Eagles' squad.

Many of the experts underrated Van Buren at first, since he did come up during World War II when many of the established stars had been called into military service. An eye defect kept him from service and also cut down on his pass-catching ability, although he was a good receiver on short passes.

He proved he could run with the stars in 1946 when he gained 529 yards for a 4.6-yard average. He came right back in '47 to grind out 1,004 yards and contributed a lot to the Eagles' Eastern Division title. Van Buren had his biggest year in 1949, when he broke his own single season record with 1,146 yards gained and also the NFL career record of 3,860 yards. He again spearheaded the Eagles to another division title and a world championship. In the title game at Los Angeles against the Rams, Van Buren ran for 196 yards from scrimmage on a day when both teams were mired down in a sea of mud to set a NFL record that still stands. He also broke the old career record of yards gained in title play-offs with 320 yards in three games.

A foot injury slowed him down to 629 yards in 1950, and he gained only 327 yards in '51. Van Buren loved football and was a player who usually averaged around 30 attempts a game, about twice as many as other backs. During the 1952 training season he shattered his right knee and decided to call it quits. In eight years with the Eagles he led the league in rushing four seasons. No other player had won this honor more than twice. He was named to the All-Pro team five times and set six rushing records that stood up for more than nine years. His 5,860 yards gained in eight seasons still ranks high on the all-time record book.

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The First One Doesn't Have A Chance!

A store sent an overdue bill to a customer, attaching a note which said: *"This bill is one year old."*

The bill came back to the store with another note, *"Happy birthday."*

Mary Lou Gores
Hampton, Minnesota

During World War II a young pilot landed on an aircraft carrier and hurried to the skipper to say, *"What a day I've had—I shot down seven Jap planes, sunk a destroyer, and left a cruiser listing."*

"Velly good, Yank, but you make one mistake!"

Tim Parker
Ellijay, Georgia

There once was a cow named Molly
Who said to her vet, *"Golly!*
How can I be contented
When a rumor's invented
That my milk is too cholesterolly?"

William J. Trickett, III
Whitacre, Virginia

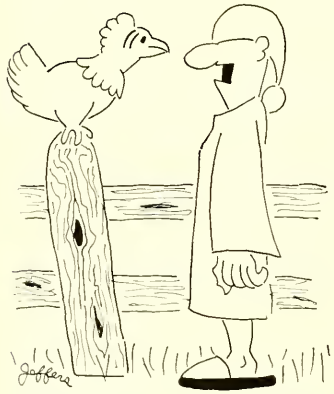
Last week a careless rabbit hunter climbed through a fence with his gun cocked. He is survived by his wife, two children, and one rabbit.

Robert Haines
Levels, West Virginia

Question: *"Why do the leaves turn red in autumn?"*

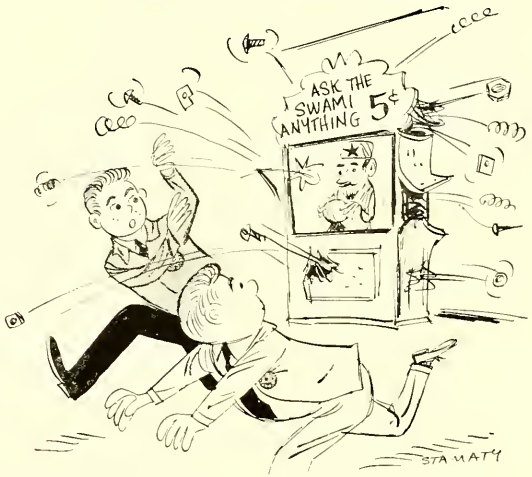
Answer: *"They're blushing to think how green they've been."*

Karen Shoesmith
Hamlin, Iowa



"How many times do I gotta tell you? We went off daylight saving time a week ago."

Charlie the Green Hand



"I asked, 'What are my chances of being the Star Farmer?' "

Two counterfeiters with a talented but stupid engraver found themselves with a large quantity of almost perfect bills on their hands. The trouble was they were $18 bills. The crooks decided to go far back into the hill country to dispose of the bills. Deep in the mountains they flashed one on an old storekeeper and asked if he would change it.

"Sure," replied the old fellow, *"would two sevens and a four be all right?"*

Ronald Morris
Salem, Indiana

A man went to a bridge party. When he arrived, he noticed a dog sitting at the table playing bridge with them. After watching it awhile, he remarked, *"That's a pretty smart dog you have there."*

His friend replied, *"Naw, he's really very stupid. Every time he gets a good hand, he wags his tail."*

Tommy Myers
Danville, Indiana

The engaged couple was out taking a walk. As she stumbled, his heart skipped a beat and he said, *"Careful, my darling."*

A year after the wedding, they were walking down the same street when she stumbled again. His comment: *"Why don't you pick up your feet?"*

Ernest Miller
Lansing, Michigan

A young miss was walking down the street sporting one of those gosh-awful hairdos which women wear today. As she passed two men, one of them turned to the other and muttered, *"Looks like her reprieve came through just as the warden pulled the switch."*

Mrs. J. R. Pestrowsky
West Point, Nebraska

Parents: *"Well, Junior, did you see the elf when he brought your birthday present last night?"*

Junior: *"No, but I heard what he said when he stubbed his toe on the bedpost."*

Bob Elliott
Haddam, Kansas

"Just how long have you had this fantastic idea that people like you?"

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